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Oration.

ORATION ON SURGERY.

DELIVERED AT THE FIFTIETH ANNUAL MEETING OF THE AMERICAN MEDICAL ASSOCIATION, HELD AT COLUMBUS, OHIO, JUNE 6-9, 1899.

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I have determined to follow the example of some of my worthy predecessors and not attempt a general review of the progress of surgery for the year, but to confine my discussion to certain points in the surgery of the alimentary canal, which had impressed me as being of greater interest to the profession. No startling discoveries in surgical science have been made, but there has been a steady advance all along the line in surgical practice. The more extended use of normal salt solution has continually demonstrated its life-saving properties so that it is now almost universally employed. The surgeon who would fail to give his patient the benefit of this valuable agent after a prolonged or bloody operation would be little less reprehensible than he who would knowingly put his patient to bed with bleeding vessels unsecured.

Salt solution may be used in so many ways and the methods of using it are so simple and easily applied that there is hardly any sufficient excuse for its nonemployment when indicated. Perhaps no better exposition of its usefulness and scientific application in medical and surgical practice has been given to the profession than the excellent and exhaustive paper of Dr. Bovée, read before the Southern Surgical and Gynecological Association, Memphis, Tenn., Dec. 6, 1898.

Salt solution seems to be the very best agent with which to flush the abdominal cavity, and large quantities may be left in the abdomen with benefit. It is also rapidly absorbed from the rectum, but where a prompter and more decided effect is desired a subcutaneous infusion is better. Intravenous transfusion is only indicated in extreme conditions where an immediate effect is imperative.

The value of rubber gloves in diminishing the danger of wound infection by the hands of the surgeon and his assistants has been proven beyond question. In America Halsted and McBurney especially deserve the thanks of the profession for their scientific and practical work in this field of research. Bacteriologic investigation has repeatedly shown the impossibility of absolutely sterilizing the hands. The micro-organisms of the deeper layers of the skin gradually find their way to the surface during operations requiring prolonged manipulation. While this source of infection by surgeons who take care of their hands and clean them thoroughly must be small, it is right to avoid "even the appearance of evil." Facility in the use of gloves is readily acquired. The slight inconvenience experienced at first is more than compensated for by the greater feeling of security which they give.

It is not my purpose to discuss surgery of the stomach, but the results of complete gastrectomy deserve notice. Four cases of complete gastrectomy are now on record: 1. The celebrated case of Schlatter of Zurich; 2, the case by Dr. Brigham of San Francisco; 3, that of Dr. Richardson of Boston; 4, the one by Dr. McDonald of San Francisco. These cases clearly demonstrate that an individual may exist for an indefinite length of time in comparatively good health without a stomach.

The post-mortem in the case of Dr. Schlatter, published in the *Medical Record*, showed that there had been no dilatation of the upper part of the intestinal tract to take the place of the stomach, which had been removed, and that death was due to general infection and not to inanition from the removal of the stomach. Dr. Richardson's case also died, I think from the metastasis. The cases of Drs. Brigham and McDonald of San Francisco are probably still alive, as there has been no published account to the contrary.

These cases show clearly that not the surgical difficulties surrounding complete removal of the stomach militate against successful results, but that when the disease is so extensive as to indicate this operation, it has already extended beyond the possibility of complete cure.

The Roux gastro-enterostomy "en Y," is an original procedure, which has received the highest professional commendation.

I quote Coley in *Progressive Medicine*, June, 1899 (for advance sheets of which I am indebted to the author), as follows:

"Roux[1] refers to the very great progress in the surgical treatment of diseases of the stomach during the last two years. During this period, instead of not being able to perform any operation in 35 per cent. of the patients that came to him, there were but two patients in which he performed only exploratory laparotomy, and but two others in which no operation at all was indicated. He has performed eleven pylorectomies against fifteen gastro-enterostomies. Simple exploratory laparotomy was performed in the proportion of 4 to 100."

"As to the method employed, he has performed six ordinary pylorectomies, with one death; two according to Kocher's method, without mortality; four by the combined methods, with two deaths; in all twelve operations with three deaths. He has performed gastro-enterostomy by his own method—"en Y," in thirty-one cases, with three deaths. He states that the most important fact to show is that posterior gastro-enterostomy "en Y" with three layers of suture, is not a dangerous operation in itself, in spite of its long duration and the possibility of the outflow of

[1] Congress of French Surgeons, 1898.

some of the gastro-intestinal contents. In a series of twenty-four gastro-enterostomies for non-malignant affections of the pylorus he has not had a death.

"Roux states that he can but recommend the trial of gastro-enterostomy 'en Y.'" The results obtained in non-malignant disease show that the operation itself is not the cause of the failures, but the debilitated condition of the patients on whom one is often constrained to operate.

Monprofit[2] gives the results of nineteen gastro-enterostomies for cancer and chronic gastritis; fourteen were for cancer, with two deaths; five for chronic gastritis, with no deaths, and in all five of these cases the gastric trouble entirely disappeared as a result of the operation. These cases are very important, inasmuch as only very recently has the operation of gastro-enterostomy been proposed or advised for this trouble. Nine operations were performed by Wolfler's method, with five perfect results, two satisfactory and

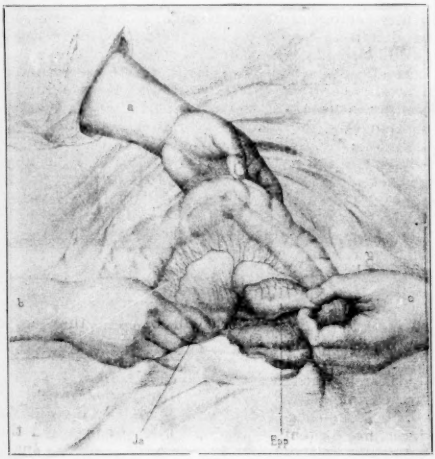

Fig. 1.—Roux's method of gastro-enterostomy "en Y."

two bad; six were operated by von Hacker's method, with five excellent results, one fairly good; two operations were performed by the method of Roux, "en Y," with two perfect results. Monprofit believes in using posterior anastomosis, either lateral or "en Y," whenever possible. He employs no mechanic aids, using silk sutures.

Method of Roux[3]—gastro-enterostomy "en Y." Every patient in feeble condition is given medicated injections for several days prior to operation. He has great faith in subcutaneous and intravenous saline solutions, and these are always ready for use, day and night. Ether narcosis is used. As to the method of procedure, the abdomen having been opened, the tranverse colon is lifted up and the mesocolon opened widely, exposing the posterior wall of the stomach. The upper portion of the jejunum is then quickly recognized. The jejunum is then divided between two Kocher clamps and the incision prolonged through the mesentery to the first arterial bifurcation at about 20 or 30 cm. from its origin. The upper portion of the cut jejunum is wrapped in gauze and placed to the left side; the lower portion is grasped by an assistant, who draws the stomach toward the opening in the mesocolon, and by gentle traction of the forceps brings the end of the gut into contact with the stomach while the operator introduces the first row of seroserous continuous sutures—using an ordinary sewing needle—into what will be the posterior border of the opening in the stomach. An incision is then made through the serous and muscular coats, and a second seromuscular continuous suture applied. Opening the mucosa of the stomach, abrasion of the intestine behind the Kocher clamp, a third continuous suture of the mucous layers entirely around, and a seromuscular suture anterior followed by a seroserous suture, complete the anastomosis. The stomach is then loosened and the mesocolon is fastened around the intestine, like a collarette, by a few catgut sutures.

The principal sutures are of silk. The hemorrhage attending the operation is trifling, seldom requiring ligatures. The incision in the stomach is parallel to the greater curvature.

Roux sees no advantage in the perpendicular incision of Doyen or in the oval incision of Jaboulay. He

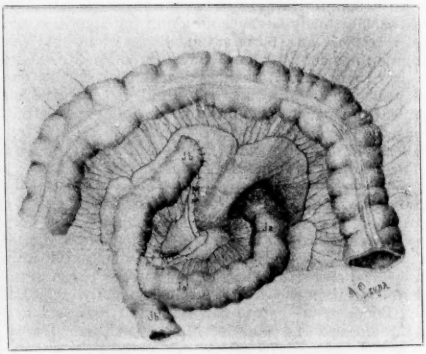

Fig. 2.—Roux's method of gastro-enterostomy "en Y."

endeavors to prevent stenosis by making a large opening in the stomach by implantation of the end of the gut instead of lateral anastomosis, and, above all, by securing healing by first intention of parts; these unite firmly and perfectly in a few days if one takes the trouble to suture in three layers without any appliance and modifications incompatible with immediate reunion. The implantation of the upper end of the jejunum is then made in the same manner, choosing, when possible, the face opposite the mesentery, and making the incision shorter.

Roux advises fixing the edges of the mesenteric incision in two or three places in order to prevent internal strangulation—a danger which advocates of other methods seem not to have considered. Roux attributes the fact that it has not been more often noted to the small number of autopsises performed on fatal cases.

Immediately after operation an injection of salt solution is given (800 to 2000 c.c.), and later on nutritive enemata, champagne, bouillon, often with a little strychnin. Above all, as soon as recovery from

[2] Congrès Français de Chirurgie,. 1898.
[3] Revue de Gynecologie et de Chirurgie Abdominale, 1897, No. 1. p. 89.

ether is complete, e.g., two or three hours after operation, the patient is given something to drink, such as champagne, milk, tea, etc. If vomiting occurs, the stomach is at once washed out, and the patient is allowed to drink on the following day. The patient has what he likes, and if he has no desire to eat, one should tempt him, if possible, to take food.

Roux states that this method of after-treatment would undoubtedly cause death in a wound badly sutured or held by a button, yet he holds that far more patients die although the operation has been well performed, because, in spite of every care in the matter of artificial feeding, they continually become weaker. These cases he believes can be saved if one is able to make them ingest something by the stomach, thereby establishing the functional activity of the upper portion of the digestive tract. Even a slight evacuation, it may be no more than gas, contributes as much to the cure as all our efforts.

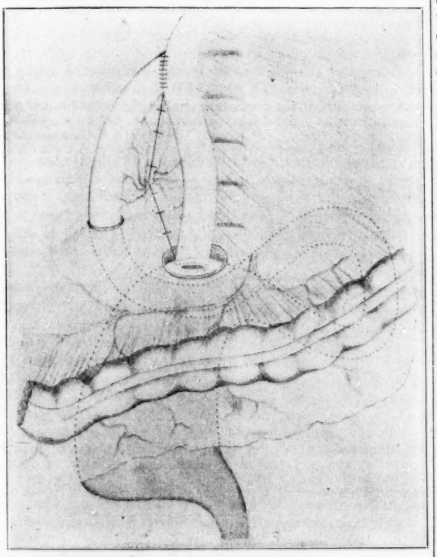

Fig. 3.—Roux's method of gastro-enterostomy "en Y."[4]

Although Keen,[5] in the Cartwright lectures for 1898, stated that the ideal method of gastro-enterostomy had yet to be discovered, I believe that the method of Roux comes very near the ideal. It is certainly ideal in the skilled hands of its inventor, though I do not believe it would give as good results as the button in the hands of surgeons but little accustomed to intestinal work; yet this should not weigh against it, for cases requiring such operation are rarely emergency cases, and can almost always take the time to secure the experienced surgeon.

Roux's mortality in 31 cases operated on by his own method is only 9.6 per cent., and in 24 cases for non-malignant stenosis he has not had a single death. Comparing the mortality with that of Chlumskij's statistics—38.09 per cent. in 231 cases operated on by Wolfler's method, and 35.52 per cent. in 152 cases operated on by Von Hacker's method—we see that while all the disadvantages of the older methods as regards the reflux of bile and food have been done away with, this great gain has been accomplished without additional risk, and, moreover, with a far lower mortality.

Roux performs his operation, without mechanic aids, in forty-five to fifty minutes. This time could probably be shortened by use of Laplace's forceps.

The cases of gunshot wounds of the abdomen received during the late war with Spain (reported by Senn, Parker and others), that recovered without surgical interference have given a new impetus to the discussion on penetrating wounds of the abdomen. It is unquestionably true that the wounds made by bullets of small caliber and high velocity, in individuals who are fasting, show a greater tendency to recovery without surgical interference than do similar wounds met with in civil practice. Under the above conditions, the holes in the hollow of the viscera are apt to be small and clean cut. The intestine being comparatively empty there is very little tendency to leakage of its contents into the peritoneum. The holes may become filled by a plug of mucus, later by organized lymph, and recovery takes place. The probability of such a desirable termination in civil practice is exceedingly small. In a large proportion of the cases occurring in civil life, these injuries are sustained by individuals laboring under great excitement, in the midst of excesses in eating and drinking—conditions which manifold the difficulties of making correct diagnoses. Not only are the difficulties of diagnosis increased, but the danger to life of penetrating wounds of the abdomen under such conditions of debauchery is greatly enhanced. Practically, the only hope under conditions like these is in prompt and thorough surgery. Is it right to waste time waiting for definite signs of hemorrhage or peritonitis? Is it right to place reliance on the hydrogen-gas test, which has only an affirmative value? Are not the dangers of increased extravasation of the intestinal contents and the delay consequent on the application of this test too great to justify its use? I am satisfied that practically each member of this ASSOCIATION would give the same answers to these questions, had he to decide them for himself. If he should receive a gunshot wound of the abdomen, apparently penetrating, with a clean, competent surgeon accessible, I feel sure he would elect immediate operation.

It is claimed, and statistics apparently bear out the claim, that when the point of entrance of the missile is above the umbilicus and the injury is received in the standing posture, there is greater probability of escape of the hollow viscera. My own observation, however, does not bear out these statistics.

In a paper read before the Southern Surgical and Gynecological Association, Memphis, Tenn., Dec. 6, 1898, and published in the *Virginia Medical Semi-Monthly*, May 12, 1899, I reported nineteen cases of penetrating wounds of the abdomen. In four of these cases the wound of entrance was situated above the umbilicus and the injuries were received in every instance in the standing posture. All four cases were subjected to laparotomy and in all them extensive injuries to the hollow viscera were found.

I do not mean to advocate operation in every case

[4] Figures 1, 2 and 3 reproduced by courtesy of Lee Bros. & Co.

[5] Phila. Med. Jour.

of penetrating wound of the abdomen, but I do mean to advocate operation in every case where the condition is not absolutely hopeless, or where there is any doubt as to the abdominal cavity having been penetrated. Nor would I advocate operation under all conditions, for I do not believe that there is any wound of the abdomen more dangerous than that made by a dirty and incompetent surgeon. The danger of the simple tracing under anesthesia of these wounds is very small indeed. If the abdominal cavity has been entered, it is then the duty of the surgeon to satisfy himself that no injury exists, or when damage has been done to either the solid or hollow viscera, to repair the same as far as possible.

Carefully prepared statistics show that recovery follows inversely to the time elapsing between the reception of the injury and surgical interference.

It is the duty of the surgeon, therefore, to decide promptly and act immediately, unless he can reconcile his conscience to that plan of "masterly inactivity" which must consign a very large proportion of his victims to untimely graves.

On account of the frequent necessity of intestinal resection in this class of injuries, I deem it proper at this point to call attention to the new operation for intestinal astomosis devised by Dr. M. L. Harris of Chicago, Ill. Dr. Harris' operation may be done very quickly (he has done it in twelve minutes) without the intervention of any foreign body. He departs from the time-honored practice of suturing serosa to serosa, and quotes Greig Smith's views as to the desirability, whenever practicable, of stitching the peritoneum to the fibrous structures. Advantages claimed by Smith and Harris for this method are stronger, better and more permanent union. Dr. Harris, in a paper read before the Chicago Medical Society, and published in the *Chicago Medical Recorder*, Vol. xii, describes his operation.

The intestine should be divided transversely, taking care to preserve the mesentery well up to the edge. The distal end of the gut is now denuded of its mucosa for a distance of one to one and a half centimeters. This is best accomplished by means of a sharp spoon or curette, but in the absence of this the blade of a scalpel or scissors may be used. The mucosa is very soft, like the "pile" of velvet, and is very easily removed by simply scraping it off.

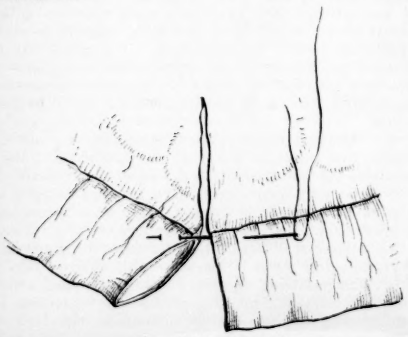

FIGURE 4.

The submucosa is so tough there is no danger of wounding it. Care should be taken that all the mucosa be removed, but the difference between the soft, pulpy mucosa and the smooth, tough submucosa is so apparent to the eye that there is no difficulty in determining when this is accomplished. The hemorrhage attending this removal is slight and soon ceases.

Next comes the invagination of the proximal into the distal end, and while this procedure is somewhat difficult to describe it is very easy and simple to execute when once seen or understood. Three ordinary sewing needles of a good length are threaded with fine sterilized silk. The first needle is made to transfix the thickness of the lower or denuded end of the bowel,

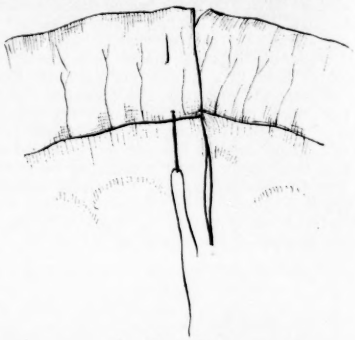

FIGURE 5.

just to one side of the mesentery, and at the inner limit of the denudation. It is not drawn clear through, but only until the point projects from the caliber of the bowel a little beyond its free edge. The point of the needle is made to pick up a bit of

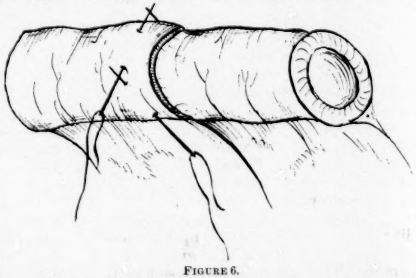

FIGURE 6.

the other end of the bowel, transversely, just to one side of its mesentery and very close to its edge. (Fig. 4.) Now, by drawing the needle back a little and using it as a lever by turning it around its point of transfixion in the lower end, it will be

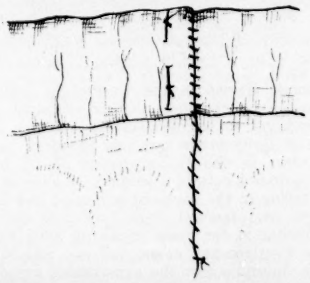

FIGURE 7.

readily seen that the upper end, on this side, is invaginated into the lower end as far as the part is denuded of its mucosa. The point of the needle is then pushed on through the lower end from within outward a short distance in a line transversely, where the needle is left temporarily, transfixing the bowel and holding that part of the upper end invaginated. (Fig. 5.) The

same process is repeated with the second needle at a corresponding point of the bowel on the opposite side of the mesentery, while the third needle is used similarly at the part of the bowel opposite the mesenteric attachment. (Fig. 6.) The needles are successively drawn through and the stitches tied, thereby permanently fixing the invaginated end to the inner limit of the denudation.

The stitches should not be too long nor too tightly tied as to pucker the bowel wall. While three stitches were originally used and described, and they are sufficient in the thicker and smaller gut of the dog, more are perhaps advisable, according to the size of the bowel in the human subject. Their object is to keep the end of the intussusceptum in accurate contact with the intussuscipiens. By an interrupted or continuous suture the exposed end of the bowel is now stitched all around to the invaginated part, care being taken not to penetrate the inner lumen of the gut. If a continuous suture be used, which, of course, is much quicker than an interrupted one, it is better to break it at least once so that when drawn tight it will not constrict the caliber of the bowel. Two or three stitches are taken on either side of the mesentery, when the operation is complete. (Fig. 7.) As will be observed there are two rows of sutures around the bowel, one at either end, thus permanently keeping the opposed surfaces in accurate contact, regardless of the varying caliber of the bowel.

The operation impresses me as almost an ideal one in suitable cases, unless a more extended trial proves that such invagination is more likely to be followed by intussusception and stricture than is liable to follow simple suture or the use of the Murphy button or the Laplace anastomosis forceps.

The question of drainage must be decided in every case where there has been much soiling of the peritoneum. General surgeons, almost without exception, prefer to drain in these cases, while a great many gynecologists close without drainage. I do not think the investigations made by Clark of the Johns Hopkins Hospital prove at all conclusively that drainage is of little value or that the drainage tract is liable to become the avenue of peritoneal infection. I am firmly convinced that many lives are saved by intelligent drainage; unquestionably many cases are drained that would do well without it.

I have collected from various sources 107 cases of typhoid perforation that have been subjected to operation. Of these 107 cases operated on, 85 died, a mortality of 79.439 per cent. I append carefully prepared tables of these operations, giving the name of the operator, the stage of the disease and the time elapsing between the occurrence of the perforation and the operation. A review of these cases shows that here, as in penetrating wounds of the abdomen, the best results are obtained by prompt operation. These tables also show that the tendency to recovery is greater where the perforation occurs late in the course of the disease. These results are most encouraging, and we may confidently expect recovery in 25 to 30 per cent. of operative cases where the operation is undertaken within twelve hours after the occurrence of perforation.

I have collected statistics of 2903 cases of appendicitis reported during 1898 and 1899; of these cases 399 died, a mortality of 13.744. I have classified these cases as interval cases, removal of the appendix during the interval; acute cases, removal of the appendix during the attack; periappendicular abscess drainage, appendix not removed; appendicitis with general peritonitis, removal of the appendix; appendicitis treated medically.

Some of these statistics were so indefinite that I found it necessary to put a large number in the unclassified list. How many of these were operations during the attack of periappendicular abscesses or appendicitis with general peritonitis it was impossible to determine. These cases properly classified might materially change the statistics of the classified cases.

There were 457 operations during the interval, with one death, a mortality of 0.022 per cent.; 874 operations were done and the appendix removed during the acute attack, with 170 deaths, a mortality of 19.45 per cent.; 238 periappendicular abscesses were drained, appendix not removed, with 59 deaths, a mortality of 24.78 per cent. In 37 operations where the appendix was removed, general peritonitis existed at the time; of these 37 cases, 22 died, a mortality of 56.75 per cent.; 896 cases were treated medically, 103 of these died, a mortality of 11.83 per cent.; 401 cases are unclassified, of which 41 died, a mortality of 10.22 per cent.

These statistics might be used in support of any of the various methods of treating appendicitis and I have presented them thus in detail, because no surgical subject during the past year has been so extensively discussed as has the treatment of appendicitis.

I had translated from the *Bull. et Mém. Soc. de Chir. de Paris*, 1898, a lengthy and heated discussion extending over several months indulged in by the members of that society. The French surgeons are about equally divided for and against immediate intervention as soon as the diagnosis is made, each surgeon arguing strongly for the opinion he holds. Of the English surgeons a decided majority seem to incline rather to the medical than the surgical treatment of the ordinary mild cases of acute appendicitis. This opinion seems to be held also by the majority of the American surgeons. Almost without exception, however, surgeons throughout the world advise interval operations where the individuals have recovered from mild recurring attacks or one severe attack of appendicitis. They also advise surgical interference during the quiescent period, in cases of chronic appendicitis; in fulminant appendicitis an early operation is almost universally advised. Persistent tumor in this region with continued constitutional symptoms, whether fluctuation be present or not, demands surgical interference.

Those who advocate intervention in all cases as soon as the diagnosis is made and at all stages of the disease are not a few, and claim in their ranks many of the ablest surgeons throughout the country. Unquestionably all are equally sincere and are equally anxious to arrive at absolutely correct conclusions, and do that which will save most lives. It is doubtless also true that more than 80 per cent. of all primary attacks of appendicitis recover under proper medical treatment. These cases are, however, by no means cured, and it would be wrong to so classify them; they have simply recovered from the one attack and are ever afterward liable to recurrence with all or even greater dangers than obtained in the primary attacks.

With these facts before us, and with the strong arguments on all sides of this question, there are many of us who find it very difficult indeed to reconcile our consciences and regulate our practice by any fixed rules. There are two extremes: one representing the medical side of this question—those who claim that all cases should be treated medically—and on the other side those who claim that all cases are at all times surgical. But between these two extremes there is an army of earnest physicians and surgeons who find they must settle the question of intervention or non-intervention for themselves in each individual

	Interval cases.			Acute cases. Operation during attack.			Periappendicular abscess. Drainage. Appendix not removed.			Appendicitis—with general peritonitis.			Medically treated.			Unclassified.			
	No. cases.	Deaths.	Per cent. Mortality.	No. cases.	Deaths.	Per cent. Mortality.	No. cases.	Deaths.	Per cent. Mortality.	No. cases.	Deaths.	Per cent. Mortality.	No. cases.	Deaths.	Per cent. Mortality.	No. cases.	Deaths.	Per cent. Mortality.	Total per cent. mortality.
Richardson and Brewster	151	0	. . .	284	63	. . .	. .	. .	. .	. .	. .	. .	180	31	. . .	. .	. .	. .	615–94=15.28
Rotter	. .	. .	. .	. .	. .	. .	. .	. .	. .	. .	. .	. .	192	51	26.51	. .	. .	. .	192–51=26.51
Czerny	26	0	0	15	5	33.3	13	3	23.07	. .	. .	. .	. .	. .	. .	. .	. .	. .	54–8=14.81
Southam	5	0	0	. .	. .	. .	3	0	0	1	1	100	. .	. .	. .	. .	. .	. .	9–1=11.11
Cordier	. .	. .	. .	. .	. .	. .	. .	. .	. .	. .	. .	. .	. .	. .	. .	16	0	0	16–0=00
Crile	. .	. .	. .	. .	. .	. .	. .	. .	. .	. .	. .	. .	. .	. .	. .	62	2	3.22	62–2=3.22
Chadwick	. .	. .	. .	. .	. .	. .	. .	. .	. .	. .	. .	. .	2	2	. .	3	0	0	5–2=40.00
Sawyer	. .	. .	. .	. .	. .	. .	. .	. .	. .	. .	. .	. .	. .	. .	. .	1	0	0	1–0=0.0
Herrick	. .	. .	. .	1	1	100	. .	. .	. .	. .	. .	. .	. .	. .	. .	. .	. .	. .	1–1=100.00
O'Connor	. .	. .	. .	20	0	0	. .	. .	. .	. .	. .	. .	. .	. .	. .	. .	. .	. .	20–0=0.0
Rutier	35	0	0	33	0	0	. .	. .	. .	24	11	45.83	. .	. .	. .	. .	. .	. .	92–11=11.95
Walther	5	0	0	10	1	10	2	0	0	. .	. .	. .	. .	. .	. .	. .	. .	. .	17–1=5.88
Walther	23	0	0	. .	. .	. .	2	0	. .	2	1	50	. .	. .	. .	. .	. .	. .	27–1=3.7
Kummel	104	0	. .	4	0	. .	. .	. .	. .	. .	. .	. .	. .	. .	. .	. .	. .	. .	108–0=0.0
Armstr'ng	84	0	0	305	63	20.65	. .	. .	. .	. .	. .	. .	228	7	3.07	. .	. .	. .	617–70=11.34
Porter. Webster	14	1	7.14	149	29	19.46	208	54	26.44	. .	. .	. .	95	13	13.68	. .	. .	. .	466–97=21.03
Hawkins.)	. .	. .	. .	. .	. .	. .	. .	. .	. .	. .	. .	. .	190	0	0	84	37	44.04	274–37=13.14
Sullivan	. .	. .	. .	. .	. .	. .	. .	. .	. .	. .	. .	. .	1	0	0	. .	. .	. .	1–0=0.0
Homans	. .	. .	. .	. .	. .	. .	2	2	100	. .	. .	. .	. .	. .	. .	. .	. .	. .	2–2=100
Deaver	. .	. .	. .	. .	. .	. .	. .	. .	. .	. .	. .	. .	. .	. .	. .	235	2	.85	235–2=.85
Walker	. .	. .	. .	4	0	0	2	0	0	. .	. .	. .	1	0	0	. .	. .	. .	7–0=0
Rodman	1	0	0	. .	. .	. .	. .	. .	. .	. .	. .	. .	. .	. .	. .	. .	. .	. .	1–0=0
Hamilton	. .	. .	. .	. .	. .	. .	1	0	0	. .	. .	. .	. .	. .	. .	. .	. .	. .	1–0=0
Boone	. .	. .	. .	. .	. .	. .	1	0	0	. .	. .	. .	. .	. .	. .	. .	. .	. .	1–0=0
Porter	1	0	0	. .	. .	. .	1	0	0	. .	. .	. .	2	0	0	. .	. .	. .	4–0=0
Bryant	7	0	0	3	1	33.3	. .	. .	. .	. .	. .	. .	. .	. .	. .	. .	. .	. .	10–1=10.00
Long, G. W.	. .	. .	. .	1	0	0	. .	. .	. .	. .	. .	. .	. .	. .	. .	. .	. .	. .	1–0=0
Stirling	. .	. .	. .	37	7	18.91	1	0	0	6	6	100	. .	. .	. .	. .	. .	. .	44–13=29.3
Long, W. J.	1	0	0	1	0	0	. .	. .	. .	1	0	0	. .	. .	. .	. .	. .	. .	3–0=0
Long, (N. C.)	. .	. .	. .	1	0	0	. .	. .	. .	. .	. .	. .	2	2	100	. .	. .	. .	3–2=66.66
McCoy	. .	. .	. .	5	0	0	2	0	0	3	3	100	3	0	. .	. .	. .	. .	13–3=23.07
Moore	. .	. .	. .	1	0	0	. .	. .	. .	. .	. .	. .	. .	. .	. .	. .	. .	. .	1–0=0
Total number cases 2003—Deaths 399. Total percentage mortality 13.744.	457	1=	.0221	874	170=	19.45	238	59=	24.78	37	22=	56.75	896	106=	11.83	401	41=	10.22	. . . . .

case. It seems to me manifestly wrong and unscientific to lay down dogmatic and inflexible rules for the treatment of a condition so protean in type. One of the strong arguments against always operating as soon as the diagnosis is made is that the time of making the diagnosis is so variable. It is sometimes made immediately, sometimes only after several days, or even weeks, have elapsed.

That the diagnosis of appendicitis should be made early, I readily concede. Only exceptional cases should prove at all confusing to the practiced diagnostician. But we must deal with facts as they are, not with ideal conditions. The diagnosis of appendicitis is not always promptly made. Every surgeon who sees much of this disease knows that a large number of the cases have gone beyond the period of early intervention when first seen by him. Then it seems to me he should be guided in his advice by the conditions that obtain. If the case is progressing favorably—good facial expression, pulse, temperature improving, less pain, tenderness and muscular tension—I think it best to wait and operate after the acute symptoms have subsided. That some of these cases will die, that an operation might have saved, is true; but would not a larger number die if all were subjected to immediate operation? This is the question that must be settled. It can only be settled permanently by fair and impartial statistics gathered from both medical and surgical sources—statistics that are definite in all essential details.

My personal experience comprises between 125 and 130 cases of appendicitis. I have operated 37 times on 35 individuals. Of the 37 operations done by myself, in 5 I simply drained large abscesses late in the disease and the appendices were not removed. In all these cases firm, strong adhesions existed, and the abscesses were surgically extraperitoneal. In none of them was the general peritoneal cavity opened. Of these five abscess cases, one has gone more than six years without the slightest symptoms of recurrence. One died a few months after the operation, from entirely independent causes; 1 has gone two years and 1 a year without recurrence. The other case suffered constantly for one year with a persistent fistula and frequently recurring abscesses. I removed the appendix in this case just exactly one year from the date of the primary operation. I have operated 7 times in this interval; all cases cured. I have removed the appendix fourteen times during acute attacks. All of these cases were pus cases and in all the general peritoneal cavity was opened. In three of them there was beginning general peritonitis, the infection having extended from perforated or gangrenous appendices to the peritoneum. In none of them was there pus in the peritoneal cavity. In one case there was a large perforation right at the cecal attachment of the appendix which had evidently occurred a short while before the operation, and there was a considerable quantity of fecal matter in the peritoneal cavity. Of these 14 cases all except 1 recovered. That was a very simple operation. The man's general condition, however, was very poor, as his attack came on in the midst of a protracted drunken spree, and he had retained absolutely nothing on his stomach for three days prior to the operation. After the operation the vomiting persisted until his death, which occurred four days later. There was no apparent general peritonitis following operation—no post-mortem.

I have attended as physician or seen as consultant over 60 cases of appendicitis that were treated medically. Of those 60 cases, 6 had peritonitis of several days' standing when I first saw them, and 1 died just as I entered the house. In all of the 6 cases I advised operation as the only hope, but in every instance it

was declined; all died. The other cases treated medically recovered from these attacks; 3 were subsequently operated on by myself in the interval. A number that I have kept under observations have had no recurrence, but the large majority I have been unable to follow up. I have seen in consultation and assisted other surgeons in 15 or 20 operative cases, but have kept no records except of my individual cases.

Medical treatment or the simple drainage of periappendicular abscess can not be considered curative. In a certain proportion of these cases—just what proportion no one can say in advance—no further trouble is experienced, but in by far the greater number there will be recurrent attacks. There is much less confidence felt now in the complete destruction of the appendix by the suppurative process. Where these abscesses had simply been drained, many that had apparently recovered required radical operation later. The statistics show a very large mortality in this class of cases. When we take into consideration the large mortality following the operation and subsequent danger to the individual, one would hardly seem justified, except in extreme cases, in allowing the appendix to remain. There are cases, however, where it seems to me to be good surgery to drain the abscess primarily, to get the patient into better condition, and remove the appendix later, when the operation can be done under much more favorable circumstances. A very large proportion of the cases of appendicitis operated on during an acute attack where drainage is employed will eventually develop ventral herniæ. Every one of my cases except one, where I had to leave drainage for forty-eight hours or longer, has a ventral hernia. Some of these herniæ are very small and cause no inconvenience; one or two are quite large, requiring support. The greater danger of ventral hernia following operations during the acute attack is to be considered.

I have just been the victim of an acute attack of appendicitis myself. My attack was sharp, decided, and the acute symptoms lasted about five days. I decided for myself, just as I would have for a patient with a similar attack, to treat the case medically, watching every development with the utmost care, and as soon thereafter as practicable I had the operation done in the interval. I was operated on May 13, 1899, by Dr. W. T. Bull of New York, just exactly three weeks from the beginning of the attack, and a little more than two weeks after all the acute symptoms had subsided.

I believe it would be safest to operate on every case of appendicitis if the operation could be done within twelve to twenty-four hours from the onset of the attack.

Every case of fulminant appendicitis is an operative case, and medical treatment is useless.

I believe every individual who has recovered from a decided attack of appendicitis should be advised to have an interval operation done.

Every case of relapsing appendicitis should be operated on during the quiescent stage if possible.

If after forty-eight hours, under appropriate medical treatment, there is a distinct improvement in all the symptoms, I should be in favor of continuing the medical treatment under careful surgical supervision. If, however, the symptoms are progressive in the face of medical treatment, immediate operation is indicated. A sharp recurrence of the acute symptoms during the progress of a medical case pursuing an apparently favorable course also indicates operative interference.

According to my observations children under 12 years of age bear appendicitis poorly and should be operated on at once. I have seen 10 cases of appendicitis in children; 4 of these I saw only when they were practically moribund from general peritonitis; 1 died on the third day, 1 on the fifth, 1 on the eighth and 1 on the tenth day from the onset of the disease. All were treated medically throughout. In all except the first I advised operation as the only hope, but surgical intervention was declined. I have removed the appendices of three children; all recovered. I assisted one of my friends in Atlanta in two operations on children; 1 died, the other recovered—1 case seen in consultation, where I advised operation recovered from the attack. The five operations on children revealed conditions from which it would have been absolutely impossible to have recovered without surgical interference. Appendicitis is a surgical disease and every case should be considered from a strictly surgical standpoint.

It is very pleasant indeed to pass from this subject to that of hernia. It is especially pleasant to consider the brilliant work that has been done in the radical cure of hernia by American surgeons—notably Marcy, Bull and Coley, De Garno and Halsted. To Dr. Marcy of Boston more than to any living surgeon perhaps belongs the credit of first advocating the closure of the separate layers of the hernial incision with buried animal sutures, and it was he who demonstrated to the profession the value of kangaroo tendon, of proper quality and carefully prepared, which seems to be the very best material for suturing the deeper layers and the radical operation for the cure of either inguinal or femoral herniæ. The mortality of the operation is probably less than 1 per cent. The percentage of recurrences is comparatively small.

Peritonitis—Cases reported by		Operations.	Deaths.
Sir Spencer Wells, 1862		1	0
Cecherelli, several years later		88	33
Tezebicky, 1888 (collected)		54	14
Kummel		40	5
Tait, 1888		1	0
Tait (subsequently)		8	2
Webster	Treves	100	70
	Kaiser	30	19
	Korte, Mickulicz, Kronlein	40	29
	Krecke	119	68
	Hawkins	11	11
Kirmisson		1	0
Van Arsdale		13	4
Van Arsdale, 1898		10	5
Lilienthal		6	4
McCosh		6	6
Middleton		1	1

Total of 601 cases, with 317 deaths or 52.41 per cent. mortality. The last case (Dr. Middleton's) died forty-eight years after operation, of heart failure.

TYPHOID PERFORATIONS.—Platt, in London *Lancet*, February, 1899.

Peritonitis—Cases reported by	Cases.	Deaths.
Keen (recent collection)	83	67
Platt	3	2
Nicholas	2	1
Gesselewitsch and Warrach	1	1
Gesselwitsch and Warrach (case of Poders)	1	1
Deaver, J. B	1	1
Deaver, H. C.; reported by J. B. D.	1	1
Burrall and Bottomley	2	1
Handford and Anderson	2	1
Goodall	1	1

Woodward	1	1
Cushing	3	2
Bigger and Campbell	1	1
Taylor	3	2
Abbé	2	2

Total number of cases, 107; deaths 83; percentage of mortality 79.439.

Successful cases.—Mickulicz, 1884; Wagner, 1889; Van Hook, 1891; Abbé, Wetschajew and Trojanow; Dandridge and Fenaresi, 1894; Hill, Murphy, Price (two cases); Watson, Sifton, 1895; Finerly, Brunton and Bowlby, 1896; Fauton, 1897; Deaver, Burrall and Bowlby; Handeford and Anderson-Cushing, 1898.

In England thirteen cases are on record, including Platt's and excluding doubtful case of Greig Smith.

Time between perforation and operation in 69 of the 103 cases.

Time between perforation and operation.	Number of cases.	Recoveries	Percentage of recoveries.
Under 12 hours	17	4	23.5
From 12 to 24 hours	26	9	34.6
From 24 to 48 hours	14	1	7.1
From 2 to 3 days	6	2	33.3
From 3 to 4 days	4	0	. .
Five days	1	0	. .
Thirty-eight days	1	0	. .

STAGE OF DISEASE.—Analysis of 76 of the 103 cases.

Perforation in course of	Cases.	Recoveries.
First week	3	2
Second week	16	3
Third week	33	6
Fourth week	5	1
Fifth week	5	1
Sixth week	1	1
Seventh week	1	1
During convalescence	3	2
Relapse	6	1
Convalescence from relapse	2	1

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Pathogenesis of Gout.—Zagari of Naples has recently reported the results of extensive research in regard to gout. He accepts De Renzi's classification of the cellular elements in the general metabolism: albuminates which produce urea and nucleins which produce the alloxur bases and uric acid. The eliminated uric acid is not an index of the gouty process and is not the essential cause of gout. This is to be sought in disturbances in the life of the cell nuclei of those tissues which are affected in gout. With defective metabolism, the deposits of their chief product, uric acid, are eliminated from the cell. Increased production and elimination of uric acid are by no means peculiar to gout. They also occur in leukemia, in epilepsy, with the application of electricity and with the ingestion of substances rich in nuclein, such as the calf's thymus. There may be in these cases a process similar to that of gout, only in other tissues; in the circulating leucocytes and blood-forming organs in leukemia, or in the nervous system with epilepsy, chorea and hemicrania. He mentions a number of cases in which temporary inflammatory processes in the lymphatic system were observed, and also asserts that the liver and spleen participate in the production of uric acid.—*Munch. Med. Woch.*, May 9.

Address.

CHAIRMAN'S ADDRESS.*

BY A. H. CORDIER, M.D.

KANSAS CITY, MO.

I assure you I feel that the words at my command are inadequate to express my appreciation and thanks for the honor you have conferred on me in selecting me for your chairman. It is an honor of which any one, I am sure, should feel proud. To preside over a Section composed of the stars of the gynecologic world is a function of much honor and responsibility—the responsibility for a successful meeting not falling alone on the officers of the Section, but on each individual, as on your co-operation hangs the success of this meeting. I desire to express my thanks for the efforts of each member of this Section; and to your worthy secretary, Dr. W. D. Haggard, too much praise can not be given for his untiring efforts and enthusiastic zeal in the arranging of the excellent program for our work.

The most difficult task to me, as your chairman, has been the writing of this address. I fully realize that the membership of this, the most important Section of the greatest medical society in the world, is made up of the representative hard-working and most scholarly gentlemen in the territory in which they reside. A recognition of this fact, I assure you, does not make the writing of an annual address more easy—far from it. I realize that each and every one present, during the past year has kept himself thoroughly informed on the progress in our special department, hence what I may say to you in this paper is merely the performance of a duty as prescribed by the by-laws of the ASSOCIATION.

It is a pleasure to review the progress made in gynecic and pelvic surgery by American physicians. The birthplace of most gynecic operative procedures is found within the domain of the United States, the originator in many instances having been at some time a member of this ASSOCIATION. What an inheritance for operators of to-day! Review the list and it is inspiring. We doff our hats in humble adoration to those who, by their labors, have smoothly paved the way and removed the stumbling-blocks of difficulty and uncertainty.

We owe our predecessors a debt of gratitude that we can only pay in installments by accepting their good precepts and endeavoring to follow or improve the same when possible. The great work of our faithful and skilled predecessors would soon become a lost art and the wheel of scientific progress cease to turn forward were it not for the labors of the members of our profession who are not content to idly look on at the suicide of the created works and results of the past masters of our art. "Perpetual work is the law of art, as is the law of life."

The supreme benefit of these annual meetings exists in the remembrance of the priceless works of those who attend and enter into these discussions.

The beneficent yield of the fruits of the labor of those gone before is gathered by us to-day, and a new crop sown, with cultures of modern technic as the fertilizer. The architects and pattern-makers of much of our work of to-day wrought long ago and have

*Prosented to the Section on Obstetrics and Diseases of Women, at the Fiftieth Annual Meeting of the American Medical Association, held in Columbus, Ohio, June 6-9, 1899.

passed on, their places being filled by others. The yoke is taken up by the younger generation at the point where it was laid aside by those pioneers. Sufficient traces of their noble designings have remained to show us that they must have been masters at the period in which they lived.

"Originality, after all, in most instances is the ability to do better what has been done before." Many old and long since abandoned surgical procedures have been resurrected under new names and made life-saving and comfort-giving methods by the skilled modern gynecologists. While the above statement is in the main true, yet as we reflect on some of the abandoned ideas or practices of a few years ago, there comes a feeling of sad enlightenment, a sagacity that lays our errors bare and leaves us without excuse in our own eyes. The adaptability of the human intellect in the selection of the good and worthy and the just rejection of the harmful and useless is nowhere better amplified than in the noble profession to which we have the honor to belong. It is true, too many modifications of ideal surgical procedures have been placed before our profession by over-zealous members, but when tried and found wanting they have been quickly rejected, thrown into the rubbish heap, to remain unless resurrected by some one to follow who has not kept abreast with the history of their birth, life and death.

> Life is a leaf of papers white,
> Whereon each one of us may write
> His word or two, and then comes night.

The justifiability of removing the uterus for cancer of that organ remained in the balance for a long time, but I trust the merits and limits of this procedure are settled on the side of surgical interference when resorted to early. While statistics of cures and failures of cures vary according to the experience of various surgeons, I feel safe in saying that while quite a percentage of the cases operated on remain cured, the post-operative history of these cases is not yet what we desire. Early recognition and prompt, thorough surgery offer the solution in part to this disappointment. Carbid of calcium, a remedy a year ago lauded very highly as a cure for cancer of the uterus, in the hands of several has had fair and faithful trial, but has been found to be no better than other remedies used for this disease, all being failures as cures.

With a better knowledge of the pathology and progress of pelvic diseases in the female, the gynecologist of to-day is in a position to intelligently advise the course to be pursued in the management of the same.

The question of most importance to us to-day is one of early and correct diagnosis, for on early discoveries the all-essential problem of prophylaxis and cure hangs.

The early detection of a gonorrhea and its proper management by the necessary local treatment and the avoidance of intrauterine sounding have materially reduced the number of tubal and ovarian specific diseases.

I am sure most surgeons will agree with me when I say that fewer suppurating tubes and ovaries are removed to-day than five years ago, not so much because these structures are being saved by the so-called conservative incisions, etc., but that there are fewer of them to treat. A few years ago the French and German gynecologic schools startled the surgical world by a dazzling array of statistics of cases of suppurating pelvic diseases operated by vaginal enucleation of the uterus and all, or part, of the diseased tubes and ovaries. This idea was quickly adopted by a number of our very best American operators, while the procedure was as vigorously opposed by others in the United States equally as skilled. A war was inaugurated, in which vaginal retractors, vulsella, tissue forceps, vs. the scalpel, fingers and ligatures were the weapons, the combatants being the leaders of the two schools, both claiming the field by favorable reports. While the conflict is not settled in the minds of many, all are agreed that there are good ideas and correct surgical principles in both methods in selected cases. Yet I am disposed to believe that the abdominal route for dealing with adherent and suppurating tubes and ovaries will remain the route of choice by the majority of American pelvic surgeons, the mortality by this method being low, the surgery complete and the relief nearly perfect. The local treatment of diseased conditions of the female pelvic organs, when amenable to such treatment, the removal of the same by surgery when otherwise incurable, in the insane and the neurasthenic, are justifiable and established procedures, and need no argument, plea nor excuse for their existence. The neurologist and gynecologist should get together on this subject, and by so doing many insane women will be restored to comfort and bodily health and in many instances to a physiologic mental state. Careful selection of cases, early diagnosis and cautious prognosis as regards the mind, but relief of pain and better health should be the promise in dealing with the insane patients with diseased pelvic viscera.

As the general practitioner becomes more familiar with the clinic phases of ectopic gestation and recognizes the dangers of the same, this condition is found more frequently. It is a common expression from a physician of a long experience, after witnessing an operation for ruptured tubal pregnancy, to say that he can now recall two or three cases of ectopic pregnancy in his experience that was a mystery at that time but clear to him after seeing a case operated on and getting the clinic history of the same. All cases of ectopic pregnancy should be operated on as soon as the diagnosis is made, unless in the latter months of pregnancy; when it may be advisable to wait until the end of gestation with the view of saving the child, this procedure should be a questionable one. The abdominal route is the safer and surer route by which to approach a ruptured and bleeding tube. I persuaded myself, after hearing the discussion on this topic at the Denver meeting last year, to open the vaginal vault in a case of ruptured tubal pregnancy, and a hemorrhage, such as I have never witnessed elsewhere, immediately began and was controlled only by quickly opening the abdomen and securing the bleeding surface with a good silk ligature. Early diagnosis of this condition and immediate and complete surgery offer the greatest chances for the patient's recovery. The everpresent danger to the woman in placenta previa is more frequently recognized by the profession than a few years ago. The surgical management of the same has lately been revived by Mr. Tait. No one who is competent to perform an abdominal hysterectomy, having under his care a case of placenta previa, should fold his arms and wait for nature to safely and successfully manage the case. It took years of missionary work to convince the profession that the destruction of a healthy, living child,

undelivered from a contracted pelvis, was not only wrong but a useless sacrifice of a human life, the mortality to mothers being far greater than that of a Porro or Cesarean section in skilled hands.

Kroenig has shown antepartum douches to be not only worthless but positively harmful. His experiments proved that the vagina is naturally sterile in as far as concerns infective bacteria, and that if douches were given in cases where the vagina had been inoculated with the streptococci and staphylococci, these germs were not destroyed by antiseptic douches, and it took the vaginal secretions from nineteen to thirty-six hours to destroy the microbes that, without the douche, would disappear in from eleven to twenty-four hours. A large percentage of the cases of puerperal fever are due, as is claimed, to unclean fingers and introduction of infected instruments. Douches may be used at the time of labor in women who have gonorrhea, with the sole idea of protecting the child's eyes, yet it is a more certain plan to rely on the prophylactic idea of dropping a drop of a 5-grain nitrate of silver solution into the infant's eyes immediately after birth.

The use of diphtheria antitoxin as a prophylactic and curative measure in this, the most dreaded disease of childhood, has passed beyond the experimental stage and is to-day almost universally used even by those who were not early converts to its certain virtues. The introduction of serotherapy in other channels up to this time is in the experimental stage, but I feel sure that in the near future other diseases, septic in character, will be successfully combated by this form of treatment.

The subject of most interest to the Section in the line of infective processes being puerperal fever, it has been shown that micro-organisms of seeming identity are capable of generating different poisons under modified surroundings. This being true, the last endeavors have been the use of immunizing and curative doses of the streptoserum in puerperal infection, this being obtained from animals infected by a number of different streptococci, as in the laboratory of Louvain, where animals are being injected with as many as five different varieties of septic micro-organisms—a species of shotgun bacterial prescription. In the Borough of Manhattan, N. Y., during the last year, there were 376 deaths from puerperal diseases. Thus it would seem that there is much yet to be done in the prevention and cure of this disease of the puerperal woman. In a late paper by Dr. S. S. Jones of New York City, he calls attention to the use of Credé's ointment of silver in puerperal sepsis. He says Credé uses a 15 per cent. ointment containing soluble uncombined metallic silver, using three grams for the initial inunction, about four grains of pure silver being absorbed into the system. In local processes the inunctions were made as far away from the seat of the disease as possible. He found that in acute and recent cases one inunction was usually sufficient to effect disinfection of the system in from twenty-four to thirty-six hours. Improvement was usually observed in ten hours; "indeed, it was so sudden as to astonish both physician and patient," says Dr. Jones.

"This silver salt occurs in small, hard pieces, having a greenish metallic luster, but when subjected to trituration it becomes pasty and assumes a yellowish tint." A 15 per cent. ointment is rubbed into the skin on the inner side of the thighs. It is presumed, in the management of these cases, that by the use of this salt all pus pockets in the pelvis are emptied by surgical methods, the treatment being reserved for purely simple septicemic cases. While this report is one very favorable in character, endorsing the use of the silver ointment, I feel that time and its further use will bring disappointment.

Original Articles.

A STUDY IN PERSPIRATION.*

ORIGINAL RESEARCH IN ONE HUNDRED AND THIRTEEN CASES.

BY JULIUS H. HOELSCHER, M.D.

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CHICAGO.

This paper deals with 113 individual analyses of human sweat, of normal and abnormal subjects It will be conceded that the study of sweat has been overlooked, and before we can fully appreciate all that pertains to it, it is essential that we familiarize ourselves with the composition of normal sweat, and how certain drugs modify its composition. I submit the following arrangement: 25 cases of passive, normal sweats; 22 cases of passive, normal, sodium salicylate sweats; 25 cases of passive, normal, pilocarpin sweats; 10 cases of passive, normal, acetanilid sweats; 7 cases of passive, normal, quinin sweats, and 24 miscellaneous sweats.

The chemic analysis is limited to the determination of reaction, specific gravity, total solids, organic and inorganic, urea and nitrogen. The quantitative analysis of phosphates chlorids, etc., will be taken up at a later time.

A chemist can readily appreciate the difficulties one would encounter if all the ingredients of human sweat were to be isolated from a single specimen; because it would require a large quantity of sweat, which in many instances could be utilized for analyzing only one ingredient. The incentive for undertaking this work is based on the fact that we are constantly using the skin for eliminative purposes in many abnormal conditions, such as uremia, rheumatism, diabetes, neurasthenia, auto-intoxication, septicemia, etc., without having a well-defined knowledge about what the skin is eliminating in a given case under normal or abnormal conditions.

Urinalysis has obtained a very important position; sweat analysis has been neglected and may play a more or less important part in the practice of medicine. Before proceeding with the analysis I will briefly review the history of perspiration as far as I have been able to obtain it from some of the literature now written.

Aliparido Noriggia is impressed by the similarity between sweat-glands and kidneys and the similarity between substances excreted by both, being more abundant in the urine. He kept a patient on a vegetable diet until the urine remained alkaline, then gave a bath and induced sweat by means of active exercise. The sweat so obtained gave an acid reaction; the urine, on the other hand, retained its alkalinity. Repeated experiments always gave the same results.

In the next trial a mule was fasted until the urine

*Read before the Chicago Society of Internal Medicine.

was acid and remained so; when sweated, the perspiration was alkaline. A sick horse was fed on an animal diet until urine remained acid; the sweat gave an alkaline reaction. He draws the conclusion that the sweat of herbivora is always alkaline, no matter what the reaction of the urine may be, and that the human sweat is always acid.

Dr. J. A. Wesener, who made all the chemic analyses for me, has observed some neutral reactions and once it was faintly alkaline; this in individuals, however, who had been sweated profusely once in forty-eight hours two or three times successively.

Dr. K. B. Hofmann, "Ueber Chromidrosis," found blue sweat which contained indigo; in several syphilitic females he found a magenta-red sweat under the axilla, which colored the linen an ochre yellow; treated with alkalies, it became red.

Duremberg and Peter found urea in sweat.

Trumpy and Luckinger, in Zurich, found normal sweat of acid reaction. That from cats' paws gave an alkaline reaction. Sweat from man was found alkaline if brought on by exercise; or if induced by pilocarpin, the reaction was always alkaline; however, if the skin was not thoroughly cleaned the reaction was acid, but soon became alkaline as the perspiration continued. They assume that the acidity is due at first to the sebum found in the sebaceous glands, which is washed out after prolonged sweating. (Here I would mention that I encountered material difficulty in properly interpreting the reaction with litmus paper, because it is not sensitive enough, and therefore submitted the question to Dr. Wesener in order to avoid error. I have already mentioned the fact that repeated sweating of one individual does apparently result in a neutral or faintly alkaline sweat.)

Turbini found jaborandi sweat acid even when the patient had been kept on a vegetable diet for one week.

Vulpian found the reaction of sweat from dogs' paws alkaline.

Turbini Anserinno found that jaborandi increases sweat at the ratio of 239 to 100. The reaction before and after was acid.

Stefano Copranica obtained 450 c.c. of sweat by means of a steam bath. Its specific gravity was 1005–1006. He found sulphur by the spectroscope, and creatinin by means of Weil's reaction.

Babesin found a red perspiration in the axilla, evidently due to ovoid bacteria which formed zoöglea masses. Treated with sulphuric acid it turns violet, and later violet-blue. Nitric acid causes the masses to change to a light yellow and then, when treated with alkalies, they assume their original color.

A. Kast writes about aromatic products in human sweat. The sweat of convalescents was collected in a bath tube. The fluid, after being chemically treated gave the following results: .2422 gm. of normal sulphates, .022 gm. of aromatics. The internal administration of salol altered the proportion in sweat as compared to urine. Normally, the ratio of aromatic sulphates was about the same in sweat and urine. The ratio of inorganic salts of sweat, compared to the same of urine, was:

	Chlorids.	Phosphates.	Sulphates.
Sweat	1	.0015	.009
Urine	1	.132	.397

By distillation phenol and oxyacid were found.

Biusine found malic, succinic and benzoic acids in the sweat of herbivora.

C. Tichborne found uric acid in sweat after using a Turkish bath.

G. B. Gueriolo reports the sweat of smallpox, malaria, typhus fever and rheumatism toxic to rabbits.

A. Leblerc says that the white foam of horses' sweat contain urea, chlorids and a coagulate proteid or albumin.

Dr. Fred Smith found that horse sweat is not modified by pilocarpin; he also found albumin in horses' sweat.

P. Argutuisky found nitrogen in two specimens of sweat; one contained total N of .2475; the other total N of .2555.

L. Devoto obtained sweat by means of a hot-air bath, and by means of chemic processes found acetone in two cases of malaria, one case of typhoid fever and one case of diabetes. In 2000 c.c. of normal sweat, he always obtained a reaction for acetone.

Ernst Heuss says the reaction of normal sweat is acid, except when very profuse, it reacts alkaline or neutral.

F. Gaube found normal sweat acid, while that of horses, oxen, cats and pigs was found to be alkaline. He found urea and .425 per cent. of albumin in human sweat, also pepsin, diastase and other ferments; in horses, 15.6 per cent. of albumin.

Erich Harnack found in a case of rheumatism, total solids, 91 per cent., .24 per cent. of this being organic and .67 per cent. being inorganic; .52 per cent. NaCl or $K.H_2P_4$—.01 magnesium phosphate.—.06 H_2SO_4 .05 potassium. The urea represented one-half of the inorganic substance.

N. Nironowitsch, in reference to the excretion of medicinal substances, found that the sweat of syphilitics treated by mercury salts contained more mercury than the urine.

Charles Colombo says massage increases the amount of sweat, which, however, was poor in urea, potassium and acids, but rich in sodium chlorid. The reaction was alkaline.

G. B. Guerrolo injected sweat into the veins. Normal sweat was non-toxic; that of smallpox, typhoid fever, articular rheumatism, was very toxic; that of tetanus was non-toxic.

S. Arloing says dogs were susceptible, guinea-pigs and rabbits less affected; 10-15 c.c. of normal sweat, by intravenous injection, will usually kill a one-kilogram dog; 20-25 c.c. is necessary to kill a one-kilogram rabbit; 20 c.c., a one-kilogram guinea-pig.

Capitan and Grey found sweat collected under aseptic conditions to be non-toxic; 20-60 c.c., by intravenous injection into a rabbit, produced no action.

Arloing found the sweat of active exercise one-fourth more toxic than passive sweat. The variation of toxicity runs parallel with the toxicity of urine.

Naveozannis says there are many conflicting opinions in reference to toxicity. Guerrolo and Calitso injected 60-100 c.c. sweat without producing toxic symptoms.

Naveozannis found that 60 c.c. were fatal to a rabbit, death following in twenty-four hours. Two rabbits died within an hour. Smaller doses produced emaciation, lasting about four or five days. Immediately after the injection there was a slight rise in the temperature, and exhaustion; paresis of hind extremities, hemoglobinuria and hematuria. Post-mortem usually found kidneys and intestines congested. The sweat possesses slight antiseptic properties toward the bacillus pyocyaneus.

PILOCARPIN PASSIVE SWEATS OF NORMAL INDIVIDUALS.

Number	Reaction	Spec. Grav.	Quantity	Total Solids	Gm. Inorganic	Gm. Organic	Total Nitrogen	Total Nitrogen Urea	Total Urea	% Solids	% Inorganic Solids	% Organic Solids	% Nitrogen	% Nitrogen Urea	% Urea
1	Acid	1.0065	60 c.c.	.78720	.41760	.36720	.04590	.03180	.06840	1.3120	.6960	.6120	.07650	.05300	.11400
2	"	1.0038	125 "	.94162	.44835	.49335	.08625	.05400	.11550	.7533	.3586	.3947	.06900	.04320	.09200
3	"	1.005	95 "	.90563	.38000	.27665	.06260	.03942	.08360	.9533	.4000	.5533	.06530	.04150	.08800
4	"	1.002	100 "	.57700	.23300	.34400	.04480	.03000	.06400	.5770	.2330	.3440	.04480	.03000	.06400
5	"	1.003	120 "	.92790	.42396	.50400	.08040	.05376	.11520	.7733	.3533	.4200	.06700	.04480	.09600
6	"	1.0034	120 "	.84792	.28800	.55992	.08511	.05376	.11520	.7066	.2400	.4666	.07093	.04480	.09600
7	Neutral	1.0046	600 "	5.71980	2.7600	2.95980	.34680	.22920	.48000	.9533	.4600	.4933	.05780	.03820	.08000
8	Acid	1.0045	120 "	2.31990	.38712	1.93284	.10260	.07872	.16800	1.9333	.3226	1.6107	.08500	.06560	.14000
9	"	1.007	140 "	1.56800	.79240	.77560	.10262	.06280	.13346	1.200	.5660	.5540	.07330	.04486	.09533
10	"	1.003	240 "	1.22544	.63024	.59520	.12312	.06624	.14064	.5106	.2626	.2480	.05130	.02760	.05860
11	"	1.004	160 "	2.38928	.66128	1.72800	.10844	.08528	.18128	1.4933	.4133	1.0800	.07770	.05330	.11330
12	"	1.005	100 "	1.20660	.56660	.64000	.08120	.05520	.11730	1.2066	.5666	.6400	.08120	.05520	.11730
13	"	1.002	250 "	1.63325	.46000	1.17325	.14510	.09550	.23650	.6533	.1840	.4693	.05804	.03820	.09460
14	"	1.0067	170 "	2.15322	.97800	1.17522	.12376	.12016	.2346	1.2666	.3400	.9266	.07280	.06480	.13800
15	"	1.003	230 "	1.35565	.64000	.91650	.16325	.09675	.23650	.6226	.2560	.3666	.06530	.03872	.09460
16	"	1.0067	40 "	.44264	.23732	.24532	.01680	.01276	.02836	.1066	.5933	.6133	.04200	.03190	.07140
17	"	1.0018	160 "	1.08896	.23248	.77648	.08656	.04416	.09376	.6306	.1453	.4853	.05410	.02760	.05860
18	"	1.0047	138 "	1.63600	.73636	.91963	.09014	.04278	.09642	1.2000	.5336	.6664	.06530	.03100	.07660
19	"	1.005	120 "	1.19520	.60000	.59520	Accident	.05808	.12312	.9960	.5200	.4960	Accident	.04840	.10260
20	"	1.004	360 "	3.75200	1.19888	1.75284	.27540	.10800	.22320	.8200	.3333	.4869	.07656	.03000	.06210
21	Neutral	1.0065	250 "	2.80000	1.51650	1.28350	.45275	.27675	.59225	1.1200	.6066	.5134	.18110	.11170	.23690
22	Acid	1.008	150 "	1.24990	.66970	.60000	.11900	.04110	.08925	.8466	.4466	.4000	.07960	.02740	.05950
23	"	1.0065	100 "	1.53330	.71330	.82000	.11200	.04440	.09660	1.5333	.7133	.8200	.11200	.04440	.09660
24	"	1.004	80 "	.61008	.15680	.43328	.05744	.05480	.11728	.7626	.1960	.5666	.07180	.06850	.14660
25	"	1.0078	95 "	1.26663	.52687	.74076	.05937	.05133	.10953	1.3333	.5546	.7787	.06250	.06250	.11530
				Sodium Bi Carbonate Sweats of Normal Individuals.											
1	Acid	1.0024	150 c.c.	1.33650	.63390	.70110	.12600	.08820	.18630	.8910	.4226	.4674	.08400	.05880	.12420
2	Neutral	1.0025	160 c.c.	1.26928	.60800	.66128	.09408	.06112	.13072	.7933	.3800	.4133	.06230	.03820	.08170
				Splenic Myelogenic Leucaemia. Passive Sweats.											
1	Acid	1.0029	120 c.c.	.89112	.36792	.52320	.16632	.08712	.18552	.7426	.3066	.4360	.08860	.07260	.15460
2	"	1.0027	285 c.c.	.77840	.92340	.85500	.13074	.08835	.20691	.6240	.3240	.3000	.04570	.03100	.07260
				Catarrhal Jaundice Passive Sweat.											
1	Acid	1.005	165 c.c.	2.91489	.68789	2.44200	.17094	.10230	.21945	1.7660	.3866	1.4801	.10360	.06200	.13330
				Passive Sweat. Acute Pleuritic Effusion											
1	Neutral	1.0023	210 c.c.	1.07793	.40026	.65667	.08232	.05733	.12306	.5133	.1906	.3127	.03920	.02730	.05860
2	Neutral	1.0024	255 "	1.34263	.53040	.81980	.09756	.07191	.15300	.5266	.2080	.3180	.03826	.02820	.06000
				Diabetes. Passive Sweat.											
1	Acid	1.002	200 c.c.	1.4800	.82000	.66000	.11860	.06906	.14772	.7400	.4100	.3300	.05928	.03453	.07386

PASSIVE SWEATS OF NORMAL INDIVIDUALS.

Number	Reaction	Specific Gravity	Quantity	% Solids	% Inorganic	% Organic	% Nitrogen	% Nitrogen by Kjeldahl	% Urea	% Solids	% Inorganic	% Organic	% Nitrogen	% Nitrogen by Kjeldahl	% Urea
1	Neutral	1.0050	100 c.c.	1.0680	.5008	.4572	.0560	Accident	Accident	1.0680	.5008	.4372	.0560	Accident	Accident
2	Acid	1.0035	75 "	.5770	.1980	.3780	.0420	.0388	.0829	.7704	.2664	.5040	.0560	.0518	.1106
3	"	1.0169	100 "	1.4696	1.4696	.7536	.0526	.0340	.0728	1.4696	.7536	.7160	.0526	.0340	.0728
4	"	1.0078	80 "	1.0446	.5894	.4416	.0561	.0323	.0668	1.3120	.7368	.5752	.0688	.0404	.0836
5	"	1.0074	70 "	.8456	.4680	.3808	.0420	Accident	Accident	1.2080	.6640	.5440	.0600	Accident	Accident
6	"	1.0045	100 "	.6548	.3000	.3548	.0513	.0300	.0640	.6548	.3000	.3548	.0513	.0300	.0640
7	Neutral	1.0075	84 "	1.2741	.6793	.5947	.0763	.0362	.0776	1.5168	.8088	.7080	.0840	.0432	.0924
8	Acid	1.0020	180 "	.8647	.3968	.4808	.0776	.0560	.1088	.4832	.2176	.2656	.0431	.0312	.0616
9	"	1.0030	190 "	1.2266	.5472	.6794	.0744	.0560	.1185	.6456	.2880	.3576	.0392	.0294	.0624
10	"	1.0020	105 "	.6040	.2446	.3643	.0451	.0284	.0609	.5800	.2330	.3470	.0430	.0276	.0580
11	"	1.0040	105 "	1.5650	.6150	.9460	.1050	.0570	.1200	1.0410	.4100	.6310	.0700	.0380	.0800
12	"	1.0050	120 "	1.1352	.6000	.5352	.0720	.0430	.0919	.9460	.5000	.4460	.0600	.0360	.0766
13	"	1.0020	180 "	1.1788	.5878	.5830	.0756	.0432	.0923	.6506	.3246	.3240	.0420	.0240	.0513
14	"	1.0034	100 "	1.3000	.5320	.7680	.0560	.0263	.0613	1.3000	.5320	.7680	.0560	.0281	.0613
15	"	1.0024	80 "	.6000	.2560	.3440	.0456	.0330	.0704	.7500	.3200	.4300	.0570	.0413	.0880
16	"	1.0045	75 "	.7350	.4530	.3000	.0336	.0207	.0435	.9800	.5800	.4000	.0448	.0276	.0580
17	"	1.0038	150 "	1.0500	.5400	.5100	.0649	.0414	.0870	1.4000	.7200	.6800	.0866	.0552	.1160
18	"	1.0034	115 "	.7739	.3594	.4140	.0483	.0287	.0621	.6730	.3130	.3600	.0420	.0253	.0540
19	"	1.0052	115 "	1.2900	.6684	.5500	.0681	.0517	.1104	1.0600	.5730	.4870	.0593	.0459	.0960
20	"	1.0034	145 "	1.3437	.6737	.6960	.0581	.0449	.0957	1.2666	.4460	.4800	.0401	.0310	.0660
21	"	1.0056	120 "	1.4076	.7200	.6876	.0684	.0432	.0879	1.1730	.6000	.5730	.0570	.0360	.0733
22	"	1.0057	120 "	1.4712	.8040	.6672	.0783	.0537	.1152	1.2260	.6700	.5560	.0653	.0448	.0960
23	"	1.0040	95 "	.8407	.2880	.5527	.0744	.0475	.1005	.9306	.3040	.6260	.0784	.0500	.1053
24	"	1.0037	65 "	.4673	.2054	.2665	.0302	.0194	.0380	.7206	.3160	.4100	.0466	.0276	.0586
25	"	1.0240	105 "	.7560	.3676	.4483	.0803	.0543	.1161	.7200	.2930	.4270	.0765	.0518	.1106
				Passive Sweats of Diphtheria.											
1	Acid	1.0048	95 c.c.	.7271	.3035	.4437	.0620	.0456	.0747	.9970	.5300	.4670	.0653	.0480	.1026
2	"	1.0049	150 "	1.3899	.7699	.6199	.0811	.0622	.1320	.9260	.5130	.4130	.0541	.0415	.0880
3	"	1.0054	90 "	.8795	.4077	.4718	.0551	.0497	.1080	.9773	.4530	.5243	.0613	.0553	.1200
4	"	1.0055	360 "	4.7278	1.0800	3.6478	1.0353	.8668	1.8237	7.3133	3.000	1.0133	.2876	.2408	.5066
5	"	1.0062	250 "	4.4682	.8000	2.1682	.5600	.4770	1.0425	1.1873	.3200	.8673	.2240	.1948	.4170
6	"	1.0054	120 "	1.5072	.4560	1.0512	.2652	.2172	.4500	1.2506	.3880	.8626	.2146	.1756	.3750
7	"	1.0057	171 "	1.5056	.5626	1.0429	.3122	.2284	.4887	.9800	.3258	.6107	.1820	.1336	.2858
				Passive Sweats of Diabetes & Chronic Rheumatism, taking Sodium Salicylate.											
1 chronic	Acid	1.0030	45 c.c.	.4997	.2145	.2833	.0398	.0193	.0546	1.1106	.4810	.6296	.0886	.0430	.1200
2 acute	"	1.0080	50 "	.8565	.3700	.5165	.0830	.0578	.1100	1.7733	.7400	1.0333	.1661	.1037	.2200
3 "	Alkaline	1.0038	900 "	7.2477	3.8034	3.4443	.5292	.4146	.8937	.8052	.4226	.3827	.0588	.0466	.0993
4 "	Acid	1.0036	440 "	2.5810	1.3200	1.2170	.1848	.1342	.2873	.5866	.3000	.2866	.0420	.0305	.0653
5 "	"	1.0068	250 "	3.6665	1.1665	2.5000	.6765	.4995	1.2830	1.4666	.4666	1.0000	.2706	.2398	.5132
6 "	"	1.0020	360 "	2.3040	.9828	1.3052	.2016	.1468	.3147	.6400	.2773	.3627	.0560	.0408	.0873
				Passive Sweats of Post Malarial Anaemia and Leucaemia.											
1	Acid	1.0037	100 c.c.	.8930	.4500	.4430	.0570	.0896	.0846	.8730	.4500	.4430	.0578	.0396	.0846
2	Neutral	1.0050	130 "	1.0149	.5320	.4784	.0655	.0511	.1094	.7773	.4093	.3680	.0504	.0393	.0842
3	Acid	1.0028	180 "	1.2600	.5400	.7200	.0806	.0556	.1191	.7000	.3000	.4000	.0448	.0309	.0662
4	Neutral	1.0028	240 "	.7746	.3818	.4960	.0715	.0508	.1080	.5533	.3466	.2067	.0298	.0216	.0450
5	"	1.0039	125 "	1.0875	.4550	.6325	.0700	.0505	.1091	.8700	.3640	.5060	.0560	.0404	.0873

PASSIVE SALICYLATE OF SODIUM SWEATS OF NORMAL INDIVIDUALS.

Number	Reaction	Spec. Grav.	Quantity	Total Solids	Y. Inorganic	Y. Organic	Y. Nitrogen	Total Nitrogen Area	Y. Urea	% Solids	% Inorganics	% Organics	% Nitrogen	% Nitrogen Urea	% Urea
1	Acid	1.0084	100 c.c.	1.08260	.84260	.84000	.08306	.03950	.08453	1.6826	.8426	.8400	.08306	.03950	.08433
2	"	1.0074	85 "	1.24350	.54400	.70150	.10548	.06630	.14212	1.4633	.6400	.8233	.12410	.07800	.16720
3	"	1.0056	132 "	1.01019	.42834	.5808	.15153	.05021	.109456	.7653	.3253	.4400	.11480	.03880	.08330
4	Neutral	1.004	720 "	3.25672	3.07152	2.27520	.26856	.13752	.29520	7426	.7266	.3160	.03750	.01910	.04100
5	"	1.004	750 "	4.63950	2.88975	1.74975	.27975	.20100	.43050	.6186	.3853	.2333	.03730	.02680	.05740
6	"	1.0046	750 "	5.94975	2.89950	3.05025	.32250	.26325	.56325	7933	.3866	.4067	.04300	.03510	.07510
7	Acid	1.0036	440 "	4.78104	1.32000	1.26004	.18480	.13420	.28732	.5866	.3000	.2866	.04200	.03050	.06530
8	"	1.003	430 "	2.44400	1.24000	1.29000	.16051	.11180	.23994	.5800	.2800	.3000	.03733	.02600	.05580
9	"	1.0038	360 "	2.53872	1.50696	1.03212	.15588	.11520	.24696	.7052	.4186	.2867	.04330	.03200	.06860
10	"	1.003	460 "	2.60836	1.34918	1.25718	.21608	.13156	.27600	.5666	.2933	.2733	.04480	.02860	.06000
11	"	1.0039	180 "	1.50588	.80388	.70308	.06714	.12628	.05634	.8366	.4466	.3906	.03730	.01460	.03130
12	"	1.0083	190 "	1.73767	.68647	1.04120	.12160	.08160	.17860	.8096	.3613	.5480	.06400	.04400	.09400
13	"	1.004	175 "	1.50727	.92855	.57872	.08155	.05450	.125825	.8613	.5306	.3307	.0466	.03400	.07190
14	"	1.002	177 "	1.34980	.63252	.71508	.11331	.08248	.17576	.7626	.3386	.4040	.06346	.046160	.09930
15	Neutral	1.0016	400 "	2.20860	1.13040	1.07760	.17920	.14584	.31200	.5520	.2826	.2694	.04480	.0346	.07800
16	"	1.003	90 "	.79794	.36000	.43794	.06534	.04437	.09486	.8866	.4000	.4866	.07260	.04930	.10540
17	"	1.004	120 "	1.27992	.59832	.68160	.10632	.07872	.16800	1.0666	.4986	.5680	.08860	.06560	.14000
18	"	1.003	175 "	1.42327	.80500	.61827	.08982	.06125	.13400	.8133	.4600	.3533	.05133	.03500	.07486
19	Acid	1.002	210 "	1.07793	.57240	.56553	.09786	.06124	.13230	.5133	.2440	.2693	.04660	.02940	.06300
20	Neutral	1.012	445 "	2.01718	1.21618	.80100	.13706	.10413	.22339	.4533	.2733	.1800	.03080	.02340	.05020
21	"	1.0023	160 "	1.31840	.62168	.69872	.11040	.04160	.14576	.8240	.3873	.4367	.06900	.04160	.09110
22	"	1.0038	170 "	1.26922	.63682	.63240	.06341	.02600	.09469	.7466	.3746	.3220	.03730	.02600	.05570
				Passive Dectanilid Sweats of Normal Individuals.											
1	Neutral	1.002	145 c.c.	.87000	.509385	.36051	.05388	.03378	.07250	.6000	.3513	.2487	.03730	.02380	.05000
2	"	1.0025	175 "	1.33000	.758275	.28120	.07350	.041475	.07647	.7600	.4833	.3269	.04200	.02370	.04370
3	Acid	1.004	110 "	.81400	.55286	.26114	.05126	.03773	.08063	.7400	.5026	.2374	.04660	.03430	.07330
4	Neutral	1.0025	125 "	.84162	.484125	.35750	.04425	.031625	.06825	.6733	.3873	.2860	.035340	.02530	.05460
5	"	1.0024	130 "	.92729	.52000	.40729	.05213	.03601	.07769	.7133	.4000	.3133	.0401	.02770	.05930
6	"	1.002	180 "	1.15434	.63000	.52434	.07740	.04932	.10566	.6413	.3501	.2913	.0430	.02740	.05870
7	"	1.004	120 "	1.17600	.62400	.55200	.07200	.05476	.11040	.9800	.5200	.4600	.06000	.04980	.09200
8	"	1.0043	90 "	.99000	.47997	.51003	.05796	.02880	.06201	1.1000	.5333	.5667	.06440	.03200	.06890
9	"	1.0026	100 "	.57060	.32000	.25060	.04200	.02450	.06320	.5706	.3200	.2506	.04200	.02950	.06320
10	Acid	1.001	120 "	.60392	.30072	.30320	.07500	.04716	.10152	.5866	.2506	.3360	.06250	.03930	.08460
				Sulphate of Quinine passive Sweats of Normal Individuals.											
1	Neutral	1.004	200 c.c.	1.42660	.80000	.62660	.04332	.05520	.11720	.7133	.4000	.3133	.04666	.02760	.05860
2	"	1.002	160 "	.94928	.59728	.35200	.06560	.03936	.08416	.5933	.3733	.2200	.04100	.02460	.05260
3	"	1.003	180 "	1.44994	.77994	.72000	.10476	.03888	.08280	.8333	.4333	.4000	.05820	.02160	.04600
4	"	1.0025	200 "	.90660	.48000	.42660	.07460	.04000	.08810	.4533	.2400	.2133	.03730	.02000	.04310
5	"	1.0025	320 "	2.29536	1.42080	.87456	.13760	.08352	.17888	.7173	.4440	.2733	.04300	.02610	.05590
6	Acid	1.0049	180 "	2.06394	1.08000	.92394	.10800	.06408	.13716	1.1133	.6000	.5133	.06000	.03560	.07620
7	Neutral	1.001	200 "	1.06660	.51460	.45200	.08020	.06000	.12000	.5333	.2573	.2760	.04010	.03000	.06000

Johnel found crystals of urea on the skin of nephritics.

Calitso says the organic secretions of epileptics possess toxins. He states that the toxins are stored up in the blood and can be removed by sweating. The sweat is very toxic and causes convulsions. While 100 c.c. of normal sweat will not kill, 18 c.c. of epileptic sweat does. The toxicity during the prodroma is much increased and later gradually diminishes. At other intervals it is normal.

It will be noticed that the question of sweat toxicity is far from answered. Indeed, it is surrounded by many conditions that stamp toxic experiments with more or less doubt. Among the more important are such as individual animal susceptibility; intravenous injection of a fluid which invariably has an acid reaction, into the alkaline blood; accidental introduction of micro-organisms into the circulation, or body; the effect of sterilization on the toxins in sweat; the difficulty encountered in differentiating between the symptoms of fright and shock and those peculiar to the injection of sweat.

I have made a limited number of experiments with reference to toxic effect which I will cite later.

The following method was adopted to procure normal sweat, without loss by evaporation, and as free as possible from skin impurities. The skin was thoroughly cleansed with alcohol and ether; soap was not used, for apparent reasons. The next step consisted in enveloping the body with sterilized gauze; over this an oilcloth was secured, completely covering the body, leaving only the head exposed; thus prepared, the subject was exposed to dry heat of a temperature not exceeding 120 F., for from one to two hours, or till it became apparent that the heat was becoming unbearable. We noticed a great difference between the numerous individuals; some responded freely at once; others, only after the third exposure; also in many instances the thin individual bore more exposure than the robust. When the point of toleration had been reached, the soaked gauze was quickly removed and submitted to pressure; in this way we obtained from three ounces to thirty-two ounces of sweat.

The individuals used for sweating were all of a normal type, on full diet, and while they, in some instances, were convalescents from mild, acute, local lesions, they were not classed as normal until completely well. Furthermore, urinalysis will not be considered in connection with sweat in this paper.

My object simply consists in adding more knowledge relative to the physiology of the skin, with more or less bearing on therapeutics and clinic facts.

The following table gives the highest and lowest percentage of ingredients of each series of sweats:

		Per cent. Solids.	Per cent. Inorganic solids.	Per cent. Organic Solids.	Per cent. Nitrog n.	Per cent. Ammonium urea.	Per cent. urea.
Normal	Highest.	1.5168	.8088	.7080	.08400	.04320	.09240
	Lowest.	.4832	.2176	.2656	.04312	.03112	.06160
Sod. salicylate	Highest.	1.6826	.8426	.8400	.08306	.03950	.08463
	Lowest.	.4533	.2733	.1800	.03080	.02340	.05020
Pilocarpin	Highest.	1.9333	.3226	1.6107	.08500	.06560	.14000
	Lowest.	.5106	.2626	.2480	.03130	.02760	.06860
Quinin	Highest.	1.1133	.6000	.5133	.06000	.03360	.07620
	Lowest.	.4533	.2400	.2133	.03730	.02000	.04310
Acetanilid	Highest.	1.1000	.5333	.5667	.06440	.03200	.06890
	Lowest.	.5706	.3200	.2506	.04200	.02950	.06320
Nephritis	Highest.	1.3133	.3000	1.0133	.28760	.24080	.50660
	Lowest.	.9260	.5130	.4130	.05410	.04150	.08800
Rheumatism	Highest.	1.7733	.7400	1.0333	1.66100	.10370	.22000
	Lowest.	1.4666	.4666	1.0000	.27060	.23980	.51320
		.5866	.3000	.2866	.04200	.03050	.06530

Briefly, first twenty-two normal, sodium salicylate, passive sweats, resulted as follows:

1. In ten the organic solids are higher than the inorganic.

2. Eleven out of twenty-five passive, normal sweats contain more organic solids than inorganic.

3. Twenty-three out of twenty-five normal, pilocarpin, passive sweats contain more organic solids than inorganic.

4. Two out of ten acetanilid sweats contain more organic than inorganic solids.

5. Seven quinin sweats contain less organic than inorganic solids.

Note that the pilocarpin sweats, with a few exceptions, contain more organic than inorganic solids; that the quinin sweats exceed in inorganic solids; that the salicylate sweats are about evenly divided, relative to organic and inorganic solids; that the passive sweats slightly favor the inorganic solids; that the acetanilid sweats favor the inorganic solids.

From the chemic analysis it at once becomes apparent that the drugs herein mentioned have more or less selective action.

Note that the first sweat obtained from a case of acute articular rheumatism during the height of the disease, contained a large excess of solids. (See Rheumatism, No. 5.) This fact opens up some interesting questions relative to the cause, or conditions, that accompany rheumatism, and I can hardly dismiss the subject without discussing the disease. The causes, direct or indirect, can be classified as follows: 1, retention of normal tissue waste material; 2, perverted functional activity, or tissue metabolism, whereby substances foreign to the normal body are produced, which cause rheumatism; 3, septic infection; 4, one or both of the first two causes which favor infection, just as diabetes mellitus renders infection more possible.

Returning to cause 1, I do not believe that it alone causes rheumatism; because if this were true, the disease would be much more amenable to treatment and would not be affected so much by other circumstances, such as atmospheric changes, epidemic features, etc.

The second cause is related to the first, differing from it, however, in that the cause is due to abnormal tissue products, and not retention of normal tissue waste. A thorough consideration of this cause would involve an extensive analysis of nutrition, special organic functions and chemistry of waste material. However, recalling now that the first sweat of a rheumatic, obtained during the height of the disease, is excessively charged with solids, we are led to assume that these solids represent tissue waste; furthermore, coincident with this feature, marked amelioration of the rheumatism follows, and especially so where profuse sweating is produced by the combined hot-air and sodium salicylate treatment. Those who favor the infection theory may argue that the tissue waste is more or less a feature of all infections, and that the salicylate aids in eliminating, as is shown by the analysis of sweat.

In reference to the third cause, this may be said: there is an infection, which, however, is rendered possible only by pre-existing, non-septic conditions mentioned in the first or second causes; believing that salicylate has an active effect on the joint symptoms, as based on clinic facts, it must be conceded that the secondary lesions, such as pericarditis, endocarditis,

etc., are not modified by this drug, and that the former, from the standpoint of some pathologists, are due to pathogenic micro-organisms. This fact rather strengthens the belief that we are dealing with both auto-intoxication and infection. This, it seems, is at present the most plausible theory.

Note that the first sweat from a case of uremic poisoning, the result of chronic interstitial nephritis, contained a large excess of solids (see Nephritis No. 4), a feature that was followed by marked amelioration of the uremia; the succeeding sweats were nearly normal. This case plainly illustrates that the skin can be used for eliminating purposes to the exclusion of other emunctories in nephritis; furthermore, this sweat feature is always present in those cases where the renal lesion forbids sufficient elimination; those wherein the urinary excretion is nearly or quite normal have not brought to light any marked sweat features from a chemic point of view; however, this statement must be accepted as purely provisional until more investigations have been made. Recalling my experience with various uremic manifestations, I feel safe in asserting that the induction of sweat by means of externally applied heat, and with or without pilocarpin, is the most reliable method of eliminating rapidly and effectively.

Here I will interpose a comparison, including the added totals of six normal, passive sweats, compared to six nephritic and six sodium salicylate, acute rheumatic, passive sweats, given in percentages as follows:

	Per cent. Inorganic.	Per cent. Organic.	Per cent. Nitrogen urea.	Per cent. Total nitrogen.
Six cases normal	3.6406	2.6045	.18356	.30835
Six cases nephritis	4.73354	9.09804	1.90274	2.32336
Six cases rheumatism	9.83698	12.16181	.90195	2.02510

Note the preponderance of organic and inorganic solids in rheumatism over the nephritic sweats, and the striking difference when compared to the normal, passive sweats. Among the clinic features it should be mentioned that the induction of passive hot-air sweats, coincident with the administration of the drugs mentioned in this article, lessens the toxic effects of the former; thus cinchonism was rarely noticeable enough to cause distress; the sialogogue effect of pilocarpin was rarely observed, this applies with equal force to the toxic effects of pilocarpin; acetanilid in 10-grain doses was not followed by marked cyanosis or prolonged depression. The drugs used were given in the following doses: Quinin, 10 grains; acetanilid, 10 grains; pilocarpin, from $\frac{1}{4}$ to $\frac{3}{4}$ grain; sodium salicylate in 30-grain doses.

A number of cases of malarial hemoglobinemia and toxemia were treated with quinin and hot-air baths, and, it appears, with better results than without the hot-air bath. Furthermore, all malarial cases responded more readily than normal to sweat induction; this feature was particularly noticeable. The good results following this treatment are due, I believe, to the eliminant effects of the sweat and, secondarily, to the physiologic action of the hot-air bath, which indirectly causes increased functional activity or tissue metabolism.

We are familiar with the fact that mercurial inunctions can be used with more satisfaction when combined with passive sweats. Thus I had a case of secondary syphilis which was extremely sensitive to mercurial salts; however, I prescribed mercurial inunctions and about eight hours thereafter a passive sweat; so treated, I was able not only to continue the inunctions but gave mercurial salts internally as well, without occasioning mercurial poisoning. You will recall that one observer claims that the skin eliminates more mercury than the kidneys. I am aware that this method is not new, but mention it on account of its importance from a clinic and therapeutic standpoint.

A brief review of the physiologic action of the hot-air bath will not be out of place. Without other aids the following conditions occur: 1, hyperemia and congestion of the skin, which then contains more fluids and becomes a better conductor of heat; 2, the skin becomes moistened by sweat, which in turn favors abstraction and increased excretion of heat; 3, the pulse-rate increases coincident with diminished arterial tension; 4, the bodily temperature becomes slightly elevated; 5, there is now increased respiration which Sihler claims is due to the warming of the blood, thereby augmenting the consumption of oxygen and excretion of carbon dioxid, the latter being due to increased tissue changes. Landois states that a man weighing sixty kilograms enlarges about sixty-two c.c. when his temperature is raised from the normal temperature to 104 F.; this enlargement is associated with expansion of the peripheral tissues and increased cutaneous congestion at the expense of internal depletion.

The administration of antipyretics in full doses, combined with the passive, dry-heat sweats in normal subjects does not modify the physiologic effects just mentioned. In fact, these drugs apparently lose their antipyretic effects. This fact opens up an interesting question; however, it would not be in keeping with the object of this paper to discuss it fully. But in all cases where quinin, sodium salicylate and acetanilid were given, and within thirty minutes were followed by the application of the hot-air bath, the temperature became elevated from 1 to 3 degrees F. above normal, reaching its highest about ninety minutes after the drug administration, and coincident with profuse sweating. Removal from the hot-air bath caused the temperature to fall rapidly.

In septic conditions, such as articular rheumatism, treated with sodium salicylate and the hot-air bath, there was no deviation from the effect just mentioned. Among the anomalous results of dry heat application I will cite the following case: A young woman, on account of a retained dead fetus, fell a victim to acute septic intoxication and acute septic nephritis. The pulse was constantly over 120 per minute, weak and compressible; the temperature ranged from 96 to 97 F.; the urine did not exceed four ounces in twenty-four hours and contained casts, albumin, blood-corpuscles, bile pigments and acetone. The whole condition was rendered more desperate by a violent uremic gastritis; it was imperative to eliminate effectively, and I realized that this could be accomplished most readily by inducing free sweating, and overcoming the depression incident thereto by means of strychnia. She was placed in contact with hot-water bottles; in the course of an hour the temperature rose to 102 F., and the pulse became stronger and did not exceed 95 per minute, however, instead of inducing free perspiration, the patient would excrete from six to eight ounces of urine after each application; this treatment was continued twice daily until recovery ensued. The case plainly illustrates the intimate relation between

the kidneys and the skin, and is mentioned only for the sake of interest. It is well known that the renal secretion is often increased by diaphoretics; though as a general rule the reverse is true. Note, however, in the case just cited, the dry heat increased the pulse strength and lessened the frequency; just contrary to the results observed in normal individuals.

Toxic experiments, as I have already stated, were made in a few instances; I submit those that were made, with the understanding, however, that much work is to be done in the future relative to this item.

In the first experiment I injected subcutaneously, 5 c.c. into a guinea-pig weighing 300 grams. No effect was noticed beyond the usual symptoms of fright. The sweat used was from a normal case.

In the second experiment, 9 c.c. of sweat from a case of chronic articular rheumatism was injected intraperitoneally into a guinea-pig weighing 270 grams. In the next 20 minutes I noticed muscular tremor, rapid respiration, ears slightly cyanosed. All these symptoms disappeared within an hour.

In the third experiment I injected 20 c.c. of normal sweat into a guinea-pig weighing 300 grams, subcutaneously. No effect whatever followed.

In the fourth experiment I injected 9 c.c. of chronic malarial fever sweat into a 270-gram weight guinea-pig, directly over the lumbar spine, subcutaneously. Result: Immediate effect, breathing laborious, ears cyanosed, pig fell on its side and lay still about six minutes, when in attempting to get up it was discovered that the hind extremities were totally paralyzed. This condition was followed by atrophy of the hind limbs and in six weeks death ensued, without recovery of paraplegia. I believe the lesion was due to pressure of injected fluid, and not traceable to the effects of the sweat ingredients.

In the fifth experiment I injected 30 c.c., subcutaneously, of sweat from a case of chronic nephritis into a fifteen-ounce guinea-pig. The pig was quiet for three hours, refused to drink or eat, had occasional muscular tremor or rigor, but recovered fully in twenty-four hours.

In the sixth experiment I injected 20 c.c. of sweat from a case of chronic malarial toxemia and hemaglobinemia, subcutaneously, into a ten-ounce guinea-pig. No effect or departure from the normal was observed.

In the seventh experiment I subcutaneously injected 32 c.c. of sweat obtained from a case of post-malarial anemia, into a guinea-pig weighing eight and a half ounces. Within ten minutes there was a well-defined rigor, rapid respiration, cyanosis of the ears; pig seemed stupid and did not actively respond to pin prick. The rigor persisted thirty minutes, and the pig fully recovered in an hour.

In the eighth experiment, subcutaneous injection of 50 c.c. of normal, passive pilocarpin sweat into a guinea-pig weighing twelve ounces. No effect was observed.

In the ninth experiment I injected, subcutaneously, 55 c.c. of malarial sweat obtained during the height of temperature rise in a case of quotidian malarial fever after a well-defined malarial chill. The guinea-pig weighed eleven ounces. The immediate effect was a light rigor from that time up to death (which occurred within ten hours). The guinea-pig, which seemed in a stupor during the first few hours, gradually became comatose and died, refusing all food and drink. Post-mortem disclosed no abnormal conditions, except hyperemia and some cloudy swelling of both kidneys. I believe the sweat in this instance was toxic and the cause of death.

In the tenth experiment I injected, intraperitoneally, 45 c.c. of sweat from a case of splenic-myelogenic leukemia, into a guinea-pig weighing nine ounces. No abnormal effect whatever followed this injection.

This completes the toxic experiments made by myself with the assistance of Dr. Friedberg. No conclusions can be drawn from them except that it requires large doses to produce any effect. In no instance was the sweat sterilized, because it was assumed that extreme heat would modify the sweat composition and thereby cause fallacious results; however, the skin was thoroughly cleansed before the sweat, and only sterilized gauze was used in all the experiments.

Assuming that the extraction of considerable fluid from a body in a short space of time altered the specific gravity of the blood, we used the chloroform-benzol method for determining the specific gravity of the blood, before and after profuse sweating. We did not note any marked difference. While the method is not infallible, I believe it will at least show any important difference. Thirteen cases were submitted to this test. It simply adds an item to the belief that the blood is a fairly stable compound and that the tissues are used partly as storehouses, or the fluid obtained by sweating is indirectly eliminated from the blood in the short space of an hour: the blood, however, preserves a certain uniform composition by taking up substances from the tissues or cells of the bodily organs during the sweating.

Among the questions that suggest themselves is one that concerns the surgeon: Does sweat possess slight antiseptic properties, and thereby render more or less innocuous the large number of micro-organisms ever present in the skin? One observer quoted in the history claims that it does toward the bacillus pyocyaneus. I have arranged to answer this question in a later report.

Before closing this article it would be of some interest to briefly discuss some of the features that have a bearing on certain skin diseases. Recalling now that sweat is always of acid reaction, and that this acidity is due to the fatty acids and sebum in the sweat and skin, may it not be reasonable to assume that this fact has a direct bearing on the chronicity of some skin diseases, such as psoriasis or chronic eczema? Abrasions or external skin lesions, it seems to me, must be constantly irritated by the substances mentioned, and thereby cause not only the chronicity, but also the itching so constantly present. We have learned that repeated sweating finally brings about an alkaline or neutral reaction, and that acetanilid favors a neutral reaction, and I offer it as a suggestion that the treatment of skin diseases is open to considerable study, when looked at from the standpoint herein suggested. I assume that a neutral or alkaline sweat would be far less irritating to the skin lesion, and in removing the irritant factor give decided therapeutic results. At all events, I have found that repeated sweating does result in causing a soft, clean, non-odorless skin, avoiding, however, the drying of sweat on the skin, thereby preventing the effect bacteria would have in indirectly causing decomposition of fatty acids.

This completes the present paper and before closing I wish to extend thanks to Dr. Friedberg, who assisted

me in all the work done and in obtaining specimens; to the German Hospital which made it possible to secure nearly all the material, and to the Alexian Brothers' Hospital; and lastly, to Dr. J. A. Wesener who made all the chemic analyses, and offered suggestions that materially aided in making the work successful.

CEREBROSPINAL PNEUMOCOCCUS INFECTION.

REPORT OF A CASE.

BY BAYARD HOLMES, M. D.
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There are many cases of rare clinic interest unreported, because the history is incomplete or because of loss of interest on the part of the observer, after the puzzle is solved by the post-mortem. Such cases are however very instructive to the reader, and the following is reported, in the hope of illustrating a rather obscure manifestation of pneumococcus infection:

On Monday, February 26, I was called in consultation to see a girl 15 years old, who had been suffering during five weeks with a complex of symptoms resembling very closely the symptoms of relapsing fever. The sickness was initiated by a chill of great severity, followed by very high temperature and severe headache, and pain extending down the back and legs. The pulse was not as rapid as would ordinarily be expected with such a temperature. The temperature fluctuated about 104 and 105 F., for nine days, when there was a complete remission. The headache disappeared, the temperature and pulse became normal, and the young girl acted as a convalescent, ate and drank naturally, and slept well. This intermission lasted a little less than a week, when a second, but shorter, spell came on with a second chill. The temperature again rose to 104, the pain in the head, the distress, and the high pyrexia returned. The pulse was again a little lower than we could ordinarily expect. This attack lasted seven days, when there was again a complete intermission, the temperature coming down to normal and with a cessation of all the other symptoms, as before. The third relapse occurred at the end of another week, with a chill and high temperature which lasted only two days, when there was an intermission of four days. A fourth relapse followed. It was during the second twenty-four hours of this relapse that I was called in and observed the girl. The patient's temperature was at this time 104 and her pulse 96. The face and body showed some emaciation, the pupils were dilated and the child was vomiting at short intervals. The respirations were slightly accelerated. The little girl begged for some relief, complained of her dreadful headache, grasped her head in her hands, and complained of the lightest touch over the scalp or face or arms or any part of the body. This hyperesthesia seemed to me most accentuated over the left side of the head, behind the ear. Her favorite position was curled up on her right side. The tongue was not noticeably coated, but the lips were chapped and about the nostrils there was some evidence of sordes. The heart and lungs and abdomen and extremities were perfectly negative on examination, except during the first and second paroxysm of fever, when there was enlargement and tenderness of the liver and spleen. Careful search was made for an area of possible pneumonia, and the heart was carefully examined for endocarditis. The abdomen and pelvis were carefully examined for suppurative foci. All the joints were examined for evidence of infection. There was no tremor of the hands and no evidence of impairment of motion or of sensation —except the hyperesthesia mentioned. The hearing seemed to be equal in both ears and the sight seemed to be perfect in both eyes. There was no evidence of any perversion of taste and the only abnormal sensation was the general hyperesthesia and the severe headache, which was referred indefinitely to every part of the head.

The diagnosis seemed to rest between relapsing fever, malaria, typhoid fever, meningitis from middle ear disease, and meningitis from some other form of infection.

With the assistance of Dr. Hall, the blood was examined, and relapsing fever and malaria both excluded. The blood-count showed a slight leucocytosis, but otherwise was perfectly normal. As soon as this result had been determined a needle was introduced into the spinal canal at the junction of the third and fourth lumbar vertebræ, and the cerebrospinal fluid allowed to run off, drop by drop. Two agar tubes and two blood-serum plates were inoculated from this serum. In twenty-four hours they had every one shown a pure culture of a diplococcus, apparently the diplococcus of pneumonia. By this means the pathologic character of the disease was definitely determined. We had to deal with a case of pneumococcus infection of the cerebrospinal lymph-spaces. At this juncture, we determined on an experiment, and secured for a small fee, three ounces of blood from a healthy German man, 21 years old, one week after a crisis from a true pneumococcus pneumonia. The blood was taken from the median vein, with all antiseptic precautions, into a sterilized flask, which was immediately put on ice and encouraged to coagulate rapidly by the addition of a few drops of calcium chlorid solution and interrupted heat and cold.

A sufficient amount of serum was at hand in twelve hours and hypodermic injection of this serum was begun; at first 60 drops, at each subsequent injection, at intervals of six hours, a double quantity. The effects of the injections seemed to be noticed at once, in a lowering of the temperature and general improvement. This continued for three days, when all the symptoms grew worse. There were repeated chills and an excessively high temperature, tremor of the extremities and apparently paralysis or an inability to co-ordinate the motions of the right leg and right arm. The right side of the face seemed to be less expressive. The patient continued to lie on the left side of the head, but turned on the right side of her body. The pupils were equally dilated, although no remedies had been administered which could produce such result. After this stupor had continued for twenty-four hours with a gradual aggravation of the symptoms; the skin over the left mastoid seemed to be edematous. This was the first localizing sign which was incontrovertible, and I determined to act on the assumption that the pneumococcus infection was due to a primary pneumococcus infection of the ear, and resulting pneumococcus meningitis and probably sinus thrombosis.

The patient's head was, therefore, shaved and prepared for operation. After shaving, the edema of the scalp over the mastoid was much plainer and a lymph

gland as large as a bean was felt. The operation was begun with more confidence.

The mastoid cells were found edematous, and cultures were made from the contents. The skull above the root of the petrous portion was opened and the dura incised. A small amount of serum flowed out, and cultures were made from this serum. The sigmoid sinus was exposed; palpitation did not determine whether it was obliterated by thrombus or not. A small incision was therefore made in the sinus, from which venus blood poured out readily. The hemorrhage was stopped by means of a tampon, and the wound in the head dressed in an ordinary fashion. This operation produced little or no effect on the course of the disease.

In twelve hours the child died; a post-mortem was made eighteen hours later. On removing the dressing there was evidence of only a trifling amount of oozing. The skullcap came off, leaving the dura behind with no evidence of adhesions. On opening the dura the interlobular spaces seemed to be filled with a cloudy fibrinous exudate, and the pia was everywhere moderately injected. There was evidence of a slight amount of pachymeningitis along the middle portion of the longitudinal sinus on both sides. There was no evidence of meningitis at the base of the cerebrum. The base of the pons and medulla was covered with a yellowish firm pus-like exudate, which extended over two-thirds of the right hemisphere of the cerebellum, and one-third of the left. Cultures were made from the exudate and the adhesions near the longitudinal sinus. The dura was stripped off from the base of the skull, with no adhesions whatever upon the left side. The left sigmoid sinus and the lateral sinuses were free from thrombi. The right sigmoid sinus was occupied by a white thrombus. The dura was adherent to the posterior side of the petrous portion of the temporal bone, and a superficial examination led me to think that the petrosa was the seat of infection, but a more careful examination revealed its integrity.

TREATMENT OF SYPHILIS.*

BY BACCELLI INTRAVENOUS INJECTIONS OF MERCURY.

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If therapeutics can be defined, "the knowledge of indications and the art of fulfilling them," it can be safely asserted and successfully maintained that the possession of so-called specific medications has been the signal of a retrograde step. No one will deny, for instance, the meager reflection accorded by the majority of medical men to the proper use and administration of such specific medicaments as mercury and quinin. The choice of the remedy being determined in advance, it would seem that nothing important remained to be considered; common sense is excluded by empiricism, and force of habit crowds out the all-important question of indications. In no other morbid entity is such culpable disregard manifested as in syphilis. When questioned regarding the mode of treating this disease, the majority of practitioners invariably outline in two words, a simple, constant and uniform method; no reasons are given; no questions asked. The diagnosis is the sole important factor. Thus, simplicity, which in therapeutics, medical and surgical, habitually marks progress, becomes a barrier to knowledge.

Convinced that syphilis presents a multiplicity of indications resulting from the variable degree of virulence of the infecting source, from the condition and resistance of the infected soil, and even from extrinsic factors, and believing that a vast number of the so-called incurable tertiary lesions[1] can be avoided or cured, that the pathogenic rôle of syphilis in medullary and cerebral affections is of greater import than is generally conceded, that mercury is superior to the iodins under all circumstances, especially in malignant and tertiary lesions, the writer desires to call attention to a much neglected method of treatment, which, in his observation and experience of over two years, possesses, under certain well-defined conditions, many advantages over all other methods.

The intravenous method of treatment is based on the incontestable fact that mercury has no effect on the organism until it enters the blood. Furthermore, it has been demonstrated (Stassano, Metchnikoff) that the leucocytes are the exclusive vehicle and agent of absorption of the mercurial preparations.

The most practical solutions habitually used are the cyanid, 1/100 and 1/200, and the sublimate 1/500 to 1/1000. The amount injected daily varies from 1 to 3 c.c.

The technic of these injections is both simple and safe; the skin over the flexor surface of the elbow having been cleansed, the arm is constricted by means of a rubber bandage, the ends of which are held by a clamp. Any prominent vein, any other region may be chosen, even the median basilic, for the needle can be controlled more easily than the lancet. The needle having been introduced obliquely, the constriction is removed by operating the clamp. With a little practice one will instantly know if the needle has penetrated the vein. This may be ascertained by separating the syringe from the needle and allowing a few drops of blood to escape. A better and safer plan suggested by the writer, is to use a medium-sized needle; in case the puncture is successful, within one or two seconds the blood will enter the syringe and color the mercurial solution. The patient should feel only the puncture of the skin, but if any fraction of the solution pass into the cellular tissue to the side or behind the vein, intense pain will be complained of immediately, followed by a painful induration which generally is absorbed after a period varying from two to three weeks. Extravasation of blood in the cellular tissue is a possible complication; it is most always due to the use of a needle of unnecessarily large caliber. The patient's arms should invariably be examined before the intravenous method is prescribed, for the cases are not infrequent (4 per cent. of the writer's cases) in which the veins can not be made sufficiently prominent to be punctured with safety. This difficulty is encountered particularly in women and in adipose patients. No dressing is required.

Danger of emboli and infection has been suggested as an objection to the intravenous medication, but upon theoretic grounds only. Experimentation demonstrates the contrary; no thrombus occurs in the vein in which an injection has been made. Hence, one can make a series of injections in the same vein; the writer has made as many as ten in the median basilic vein without causing the slightest local or gen-

* Read at the Twenty-ninth Annual Meeting of the Medical Society of the State of California, April, 1899.

[1] Excluding tabes, 50 per cent. of medullary affections are of syphilitic origin. Gilles de la Tourette, Myélites Syphilitiques. Paris, 1899.

No.	Age and sex.	Lesions present.	Previous treatment and result.	Number of injections.	Results.	Remarks.
1	25, M.*	Marked diffuse glossitis of six months' duration.	Inunctions and iodids without effect.	20	Radical change after the fifth injection; tongue reduced one-third in size.	No relapse 14 months later; during one day mild stomatitis; no iodids used.
2	27, M.	Extensive secondary buccal and cutaneous.	Hg_2I_2 proved useless	14	All lesions cleared up within two weeks.	Subsequent use of Hg_2I_2 prevented relapse.
3	29, F.	Rupia	Inunctions daily during 8 days, without effect.	14	Radical change after the fifth injection.	Subsequent treatment with Hg_2I_2 satisfactory (4 c.c. 1/50 subl.).
4	35, M.*	Contracted from untreated source; early malignancy; phagedenism; grave buccal and laryng. lesions.	Six weeks of Hg_2I_2 and 12 inunctions failed to control the disease.	10	Favorable change after the 4th injection; phagedenism arrested on 6th day; healed 8 days later.	Massive daily doses were given without causing either buccal or intestinal disturbances.
5	25, F.	Recurring marked anorectal ulcerations.	Inunctions caused very grave buccal disorder.	15	Immediate favorable change.	Subsequent treatment with Hg_2I_2 and iodid.
6	27, M.	Phagedenic chancre	No previous treatment.	10	Destructive process arrested after 3 injections; rapid healing.	Alcoholic patient, Hg_2I_2 subsequently.
7	30, M.*	Infection at same untreated source as No. 4; early malignancy; periostitis, tuberculides.	Inunctions caused grave intoxication.	14	Rapid movement in both local and general condition.	No toxin symptoms developed after use of injections; mild recurrence 4 months later treated with Hg_2I_2.
8	40, M.	Sylvian syphilis		12	Atrocious nocturnal cephalalgia ceased after third injection.	Subsequent successful treatment with KI and inunctions.
9	28, M.*	Chancre unhealed after five weeks; severe buccal lesions.	Hg_2I_2 Ung. Hydr. locally.	14	Chancre healed in one week; rapid improvement.	Mild symptoms of cerebral congestion followed second injection of 2 c.c. subl., 1/200, lasted 2 hours and did not recur with subsequent injection.
10	42, M.	Small gummatous lesion on hard palate.	Three years intermittent inunctions and Hg_2I_2.	12	Favorable change after 4 inject.; cicatrization after 9. No iodids used.	Two years previous gumma excised from penis.
11	45, M*	Eighteen months after chancre pseudo-tabetic symptoms, fulgurant lumbar pains, Romberg's sign, pupils unequal, patellar reflexes greatly exaggerated.	KI and inunctions during three months.	36 in three series.	Pain ceased after 10 inject.; gait improved rapidly; patient returned to work (tailor) three months later; subsequent treatment refused.	Died fourteen months later in China after a short illness.
12	32, M.	Multiple cranial gummata	KI and inunctions used intermittently with no result.	24	Immediate favorable change; result excellent.	Surgical intervention in two lesions: only iodid continued.
13	22, F.	Intense infection from untreated source, iritis before complete cicatrization of chancre, periostitis.		14	Cessation of pain after four injections.	Subsequent treatment with Hg_2I_2 satisfactory.
14	30, F.	Early malignant syphilis—necrosis of tibia; gumma of sub-thyroid region, extending to the sternum; dyspnea.	Intermittently KI and inunctions for two years.	8 inject. 3 c.c. subl. 1/200.	Pain and dyspnea diminished, after 2 inject. on 10th day, patient resumed her work, remaining free from pain and comfortable for two months	Gummatous tissue excised as far as prudent as a preliminary measure. Subsequent treatment refused; death six months later; C. & C. Hosp., S. F.

* Indicates Chinese patient.

eral disturbance. In order to determine and compare the effects produced on and in the veins by mercurial solutions of various strength, a series of injections was made with corrosive sublimate. The results were briefly as follows:

With a solution 1/50, after twelve hours, a painless indurated mass appeared on the course of the vein, extending from 2 to 4 cm. on the efferent and 1 cm. on the afferent side of the puncture point. The vein does not, however, collapse completely until the second day. On the fifth day, the induration shows signs of resorption, and generally the blood-current is re-established, though very feebly, ten days later. In two cases, the endoperiphlebitis gave rise to complete permanent occlusion. In two other cases, having received injections of 1/200, collapse of the vein persisted for seven weeks; nevertheless, the necropsy showed all the vessels previous.

With a solution 1/250 to 1/400; periphlebitis and bruising of the cellular tissue occurred much less frequently than with the stronger solutions. No permanent occlusion of the vein was noted.

With a solution of 1/500 to 1/1000, with proper needles, no accidents occurred. It is, therefore, evident that strong solutions of sublimate should be strictly avoided. Cyanid of mercury is more easily handled, and can be used for intravenous injections in solutions of .5 and 1 per cent. Moreover, it contains 80 per cent. of mercury, whereas sublimate contains only 73.72 per cent.[2]

The rapid absorption and complete elimination of the mercury, in the intravenous method, are demonstrated by its appearance in the urine within ten minutes after having been injected, and by its disappearance therefrom thirty-six hours later.[3]

Examination of the patient's blood affords an accurate mode of determining the effects produced by the mercury; with small diluted doses there occurs an increase of red corpuscles and hemoglobin, with diminution of white corpuscles, or retardation of their multiplication. With large does, the conditions are reversed; the white corpuscles increase immediately. Mercurial anemia may thus be easily and rapidly controlled or avoided.

COMPARISON WITH OTHER METHODS OF ADMINISTERING MERCURY.

The intravenous method will never supplant the older methods which have stood the test of time, especially the ideally simple and eminently practical method of ingestion, which is admirably borne by the majority of patients, and proves adequate in 80 per cent. of cases, this figure representing the average proportion of benign to grave syphilis. It must also be remembered that certain lesions—roseola, macular syphilis and polyadenitis—are more easily controlled by a certain mercurial preparation which can only be given by ingestion, i. e., protoiodid. For cases of average severity, requiring a long series of intermittent treatments, it is customary to prescribe the inunction method, a useful and active form of treatment, it is admitted, but for which, in many cases, the writer would substitute the intravenous method. Besides being unclean, inunctions constitute a blind irregular medication, with which the patient is indifferently requested to experiment. For the production of sudden grave buccal lesions, inunctions have no rival.

The hypodermic method comprises: 1, the injec-

[2] The proportion of mercury in the various preparations for hypodermatic use is as follows: Soluble—cyanid, 79 per cent.; corrosive sublimate, 74; peptonate, 25 to 50; red iodin, 45. Insoluble—red oxid, 92 per cent.; calomel, 85; sulphate, 82; salicylate, 59; tannate, 25 to 50; albuminate, 10 per cent.

[3] Mercury appears in the urine (Linden), three to seven days after use by inunction; two to five after ingestion; two hours after hypodermic injection; ten minutes or less after intravenous injection.

tion of soluble salts of mercury; 2, injections of insoluble mercurial preparations. The necessity of daily injections, frequently followed by painful nodules, makes the first method impossible for routine treatment, and it is, moreover, not always sufficiently active for grave cases. The writer has used only one form of insoluble mercurial preparation, i. e., calomel—Scarenzio-Smirnoff method—and, notwithstanding the preliminary use of Schleich's infiltration, the majority of the patients rebelled, at an early stage, against its continuance. There is no more certain mode of emptying a hospital ward (Besnier).

Compared with the intravenous method, injections of calomel offer many disadvantages: 1. The pain experienced at the time of the injection, although severe in some patients, does not equal in severity that which generally occurs on the second day. The patient likens the latter pain to a sudden hard blow. A certain amount of rest is consequently necessary after each injection. Morel-Lavallee prescribes thirty-six hours. 2. Nodules can not be avoided; furthermore, many of the cases requiring mercury in an active form are already predisposed to eschars—myelitis. 3. Notwithstanding the most careful asepsis, abscesses will occur—aseptic suppuration. 4. The absorbtion of mercury in this method is subject to no definite laws; it varies with, and even in, each patient. Numerous chemic and histologic changes occur, according to the region and tissue injected, and the degree of leucocytic activity in the pocket thus formed must vary in consequences. Furthermore, sudden dangerous intoxication has been noted by several observers, after the syphilitic symptoms had entirely subsided—five weeks after injection in the case of Renault.

The writer has resorted to the intravenous method in the treatment of a large number of cases of syphilis, both as a routine, and as an exceptional or temporary mode of treatment. For obvious reasons, the first plan was abandoned. The value of the second plan is illustrated in the preceding table of selected personal cases:

No ill results followed the use of the usual solutions. Only two complications were noted: a mild stomatitis lasting twenty-four hours, and a submaxillary abscess shortly after a massive experimental dose of sublimate—15 c. c. of 1/200 solution. In the majority of cases the injections were made daily at the elbow—one in the saphenous vein.

INDICATIONS FOR USE OF INTRAVENOUS METHOD.

This method should be regarded as an exceptional measure, of infinite value in cases where other recognized methods have failed—glossitis, phagedenism—and in cases demanding rapid action, or early intense mercurialization—malignancy. It should be reserved for lesions of exceptional severity: phagedenic chancre, primarily malignant syphilis, tertiary of the eye, brain, cord, nerves and tongue. In the majority of these cases the patient will have already been submitted to some form of specific medication, but the disease has, nevertheless, continued its ravages. In the differential diagnosis of certain neoplasms in suspected tertiary syphilis, or in the presence of the numerous pseudo phenomena or grave symptoms, such as epileptiform, coma, etc., of obscure origin, intravenous injections of mercury constitute the only thorough test, of infinitely greater value than the iodins. The rapid and positive action of these injections can not be disputed, but, for obvious reasons, this mode of treatment must be followed or supplemented by some simpler and more practical method as soon as the special indications have been fulfilled.

In concluding, the writer urges a more thorough examination of syphilitic subjects, prior to making therapeutic deductions. The influence of many infections, it must be remembered, continues long after apparent cure. Do not, therefore, be content with inspection of the skin and mucous membranes. Observe the patient's walk, examine his limbs, consult his reflexes, palpate his arteries, his lymphatics, test his pupils, and do not forget his vesical and rectal functions. If syphilis is to be treated, let the task be undertaken at the opportune moment, and accomplished in an intelligent and thorough manner. What can mercury and iodid avail against a sequestrum, a thrombus, a sclerosed lesion, or secondary descending degeneration? Above all, do not allow the question of seed to obscure the factor soil. "We are equal in the presence of a chancre" (Ricord), but the inequality of individuals is nowhere more lucidly demonstrated than in the evolution of syphilis.

"CHRISTIAN SCIENCE" AND ALLIED FADS.*

THE ATTITUDE THAT SHOULD BE ASSUMED BY THE MEDICAL PROFESSION.

BY JOHN CHADWICK OLIVER, M.D.

CINCINNATI.

The past history of medicine has furnished many and diverse anomalies in the line of methods of treatment, and the present day has brought many queer practices to light. By an odd coincidence most of the modern vagaries have for their basis a religious idea or thought. They endeavor to supplant material treatment by a spiritual or religious agency. At least, the advocates of these methods endeavor to use the Bible as their text-book on modern medicine. An effort is made to substitute the Word of God for the efforts of man, and hence the very natural conclusion that the agency of man is entirely unnecessary and even presumptuous.

It is a great mistake on the part of the medical profession to ignore these peculiar people. It is equally unwise to abuse or uselessly antagonize them. Some of them are honest in their beliefs, and it should therefore be the aim of physicians to educate and enlighten them. Harsh criticism and ill-advised scolding will do more to upbuild their numbers, to convince them of the animosity of physicians, and cause them to pose as martyrs, than any other course that can be adopted. Let us then meet them on the field of reason and common sense. Let us inquire as to the principles upon which their claims rest, and then dispassionately review the subject from a common standpoint.

The first step in this consideration is to remove the religious or superstitious element from the discussion. Does the Bible anywhere teach that men must rely on the supernatural and leave out of consideration the natural? Is there anywhere the assurance given that natural and temporal means are of no avail?

It is beside the purpose of this paper to go into an exhaustive theologic discussion of the subject, for

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two reasons: 1, theology is somewhat out of our line, and, 2, it is entirely unnecessary to go into this phase of the subject, because all of the claim for supernatural intervention—one might almost say interference—can be much better and more clearly explained by the knowledge we possess of the ability the human body has of combatting disease, and of restoring itself to a condition of health.

The result therefore attributed by these believers to divine intervention is more correctly interpreted by the medical profession to mean that the Creator has so constituted the human body as to render it able to throw off certain indispositions without assistance. The *vis medicatrix naturæ* has been known and worshiped by physicians for many, many decades. The more we know of this subtle and peculiar power of regeneration, the more we admire and use it. To a logical and well-informed mind this is the foundation-stone upon which all "Christian Science," "divine healing," etc., rests.

There is another element that enters into these fads, and that is "faith." Far be it from the medical profession to decry the utility and necessity of this element. Each one of us knows that faith or trust or confidence in one's physician is a very important factor in the battle with disease. Faith in God is very commendable. Faith in man is also necessary and essential. Each physician strives to so conduct himself as to gain the confidence or faith of his patient, and he knows the great value of this to the patient. We often hear sick people say: "Why! Doctor, it makes me feel better just to see you! Come again to-morrow." Many and many a time does a physician relieve his patient by his conversation and presence more than by the remedies prescribed, and often no medicament is at all necessary. This is the result of "faith."

The third element to be considered is the mental diversion wrought by having the patient fix his—usually her—mind on some other subject than the disease. The late Dr. Comegys frequently remarked that he had often been able to accomplish seemingly wonderful cures (?) by obtaining the patient's promise not to discuss his ills with any one, not even to refer to them, for twenty-four hours. At the expiration of the time the promise would be extended; and so on until the mind was diverted from its constant dwelling on one subject, and the ills would then gradually sink into insignificance. Mental diversion is given its widest application in the Weir-Mitchell treatment, and every successful and intelligent physician is ready to bear testimony to its efficacy in a certain class of disorders. The result is brought about very largely through the personal influence of the physician on the patient, and the beneficial effects are heightened by the omission of drugs. You may call this power whatever you please, but you can not deny its existence. Before passing from this phase of the subject let me remind you that these fads are not new; they are but slightly modified manifestations of the curious ideas that have gone before. Homeopathy, I mean the old-fashioned brand, when analyzed, was found to rest on the tripod of *vis medicatrix naturæ*—faith and hope. In this mode of treatment the faith was not of a religious nature.

Some of us, nearly all in fact, will go farther than do the "faddists." We can truthfully say that many, many sick people will get well without prayers and without drugs. The self-limitation of many diseases is much more thoroughly understood by physicians than by "Christian Scientists," and our faith in the accuracy of our knowledge is very profound. The mortality in patients treated (?) by "Christian Science" will be just the same as the death-rate among those receiving absolutely no medical treatment—nay, it will be higher, because they may become so much interested in their prayers as to neglect to obtain good nursing and proper diet. The early homeopaths were much wiser, because they devoted careful attention to dietetics.

It may therefore be admitted that the principles which underlie "Christian Science" are good, and that they have a real foundation in fact and experience. It should also be admitted that physicians have for centuries recognized and used these same aids in the treatment of disease. There is nothing new in the scheme except the mysticism and unwarranted perversion of scripture.

Now, having admitted that their claims for a certain percentage of recoveries have a veritable existence, we must point out to them that they are misleading themselves and others as to the source from which recovery comes. The idea of a Supreme Being interesting himself in each and every case of illness is a very pleasant one, and very comforting to one's idea of his own importance; it really adds very much to one's self-conceit; but alas! there is not one iota of evidence to prove that these people are especially anointed of the Lord, or that they recover their health in any larger proportion than do the very outcast and scum of creation; in point of fact, one may safely say that the more worthless—apparently—an individual, the more likely he is to regain health and strength.

Thus far we have journeyed along very amicably, the only difference being that we eschew any supernatural agency in accounting for the phenomena of recovery from disease, while our friends attribute to a divine agency what we know to be the result of purely natural forces. We substitute the *vis medicatrix naturæ* for divine intervention, but admit the efficacy of faith, hope and mental diversion. Up to this point our views are so similar that no serious disagreement need arise—we believe in the same things, but call them by different names.

The foregoing ideas constitute the entire armamentarium of "Christian Science." They now stand still, perfectly content with their very meager view of the possibilities of medical science, never dreaming but what they know it all. Happy in their ignorance, they complacently hug this little bit of knowledge to their breasts and fondly delude themselves into the belief that there is nothing beyond. Physicians take these same ideas as a starting-point from which to project long lines of patient, painstaking research. Surgery, with its long vista of possibilities, opens up before the assiduous labors of the physician, and he is enabled to save thousands of lives which would surely be lost were he to rely on a policy of waiting, watching, praying, hoping, and having faith. Thousands of hideous deformities are removed, blind eyes are made to see—the beautiful young child, choking to death because of the presence of a cruel membrane in the throat, is restored to its parents through the knowledge brought about by scientific experimentation and careful welding together of observations. The mother, whose life is endangered by a malposition or dystocia of her unborn babe, is saved from a

cruel, painful death by the application of medical knowledge.

Many, many similar examples can be quoted to show the beneficent mission of the medical profession, but why multiply instances? If it can be shown that the medical profession is cognizant of the principles which underlie "Christian Science," and that they know much more, then the deduction is irresistible that "Christian Science" is a proof of the old saying that "a little learning is a dangerous thing," and that in many cases it is the most unchristian cowardice, and the most devilish mockery.

Now, one great mistake made in discussions similar to this is that physicians have allowed themselves to make intemperate and illy-considered statements, and have given their opponents the opportunity to pose in the light of martyrs tied to the stake of custom, and subject to the cruel fire of prejudice. This is a strong position to occupy before the public, and particularly the American public, because they love fair play, and usually take sides with the "under dog in the fight." Homeopathy would not be alive to-day were it not for the impetus received from its alleged persecution by the regular profession.

We should, therefore, learn from our past mistakes and not repeat them whenever we are given an opportunity to do so. What do we gain by denying any and all merit to the "fads" under discussion? Would it not be a much more sensible course to acknowledge that the powers of nature will give an appearance of truth to their claims, and then gently and kindly lead them to realize that physicians have employed these identic means for hundreds of years, and still employ them, but that they constitute but a part of the grand science of medicine?

Would it not be well, in view of the fact that they rely on faith and hope, for us to add the other virtue to the trinity, and have charity for their narrow, superficial and superstitious belief?

Let us, therefore, convince them and all the world, that breadth of knowledge breeds magnanimity and charity for the errors and superstitions of those to whom the light of science is unrevealed. By education they may be led to see the great harm they are doing, both to the cause of religion and to the cause of honest scientific endeavor. May we not trust that each physician will feel it his duty to act as a missionary among these benighted brethren, and that he will kindly and patiently seek to woo them, by reason, from the false gods of superstition and ignorance, for these are the foundation upon which they build? Or, failing in this laudable ambition, would it not be the part of wisdom to ignore their existence and thus quietly allow them to depart to that oblivion which enshrouds the remains of previous delusions and neurotic vaporings?

Etiology of Whooping-Cough.—A recent Paris thesis (A. Cavasse, 1899) is a complete study of the bacteriology of this affection in 330 cases. Nothing was found in the blood or urine; negative results also in the tracheobronchic ganglia and pneumogastric and in the cerebrospinal fluid. Staphylo- and streptococci were found in the liver and spleen, the latter also in the medulla, and strepto- and pneumococci and pneumobacilli in the pulmonary juice. In the sputa alone was found the polar bacterium of Czaplewski, and this was discovered in every case. Inoculations of animals with this Czaplewski bacterium and agglutinating tests were negative in every respect.—*Presse Méd.*, April 26.

CYSTICERCUS CELLULOSÆ OF BRAIN AND SPINAL CORD.*

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The relation between the common bladder-worm of the pig, or *cysticercus cellulosæ*, and the hook-bearing tapeworm that infests the intestines of man, known as tenia solium, was not recognized until 1853, when Küchenmeister first called attention to the resemblance of the bladder-worm head and the head of tenia solium.[1] His observations were soon corroborated, mainly on experimental grounds, by Leuckart,[2] Haubner, Van Beneden and many others[3]—that the eggs of tenia solium, when introduced into the stomach of the pig, by feeding pigs with ripe segments, develop into the familiar bladder-worm (measly pork)—and that the latter is the larval form of the above tenia. Furthermore, the life cycle of this parasite is completed by the metamorphosis of the bladder-worm into the adult tapeworm, when the bladder-worm is taken into the stomach of man and in a few of the lower animals. The knowledge of its life history is of considerable importance, since the larval stage of this worm, as is well known, is also capable of developing in man, and at times producing serious results, especially when the cysticerci are situated in the brain, eye and heart muscle.

Leuckart divides the life history of the tapeworm into five stages: 1, the six-hooked embryo; 2, the bladder-worm or cysticercus cellulosæ; 3, the tapeworm head without joints (scolex); 4, the proper chain-like form (strobila); and 5, finally, the isolated sexual animal, segment or proglottis. Practically two stages only are considered, the larval and the adult. Starting with the adult tapeworm in the intestine of man, the infection with the larval form and its mode of development in man is briefly as follows: The ripe eggs or six-hooked embryos escape from the uterus of the segment and pass out with the excreta, or segments may break loose from the worm and then pass out with the excreta. A person may soil his hands with the eggs by handling the segments, and afterward swallowing them, or they may gain access through contaminated water. Self-infection may also take place. The segments may be carried into the stomach by reverse peristalsis. On arriving in the stomach, the embryos bore their way through the walls of the stomach by means of the six little hooks and wander to the muscles, or penetrate a blood-vessel, and may then be carried to various organs of the body. The embryo loses its hooks when it comes to rest, increases in size and develops into a round bladder-worm or cysticercus. During its development it may become encapsulated by connective tissue of the host, as a result of reactive inflammation. A fully developed bladder-worm consists of the future tapeworm head (scolex) with its suckers and row of hooks. The head is formed in an invagination of the cyst wall. The whole process of formation is estimated as from ten to eighteen weeks. The bladder-worm is capable of living for years, but as a rule it undergoes calcareous degeneration when the cyst becomes quite old, resembling on examination a cheesy tubercle.

As to the frequency of cysticercus cellulosæ in America—it must indeed be a rare disease. Stiles,[4] who is an authority on the subject, calls attention to

*Read before the Chicago Pathological Society, May 8, 1899.

the rarity of tenia solium and its larval stage (cysticercus cellulosæ) in America, not only in man, but also in the hog. I have collected only eight cases from American literature. The first case seems to have been reported by Schilling[5] of New York, in 1857. The patient was a German woman, 31 years of age. She had epilepsy for a number of years, and other nervous symptoms. On post-mortem examination, numerous cysticerci were found in the brain, and several in the heart muscle. In five cases the parasite was present in the eye. Reynolds[6] of Louisville reported one case in 1874; Kipp[7] of Newark, N. J., one in 1876, and C. S. Turnbull[8] of Philadelphia a case in 1879. The other two cases quoted by him were reported, one by Calhoun of Atlanta, Ga., in 1878, and the other by Morton (Philadelphia?), in 1870. Osler[9] mentions a case in his "Practice of Medicine" which came under his observation; the cysticerci were present in the subcutaneous tissue. Recently a case was reported by Cattell;[10] the patient was thought to have died of hydrophobia—a few cysticerci were found in the brain.

The case now to be reported was that of a married woman, white, aged 34, a native of Germany, residing in Cook County, Illinois, for fourteen years, and admitted to the Cook County Hospital, Chicago, on Oct. 22, 1898, in the service of Dr. Blouke. At the time of admission the patient was unconscious, and the following history was obtained from the relatives: Menses began at 16; regular, but accompanied by more or less dizziness; was married at age of 21, but never became pregnant. She always had "fits" at the time of the monthly sickness, and they have become more severe during the last ten years. These attacks could always be foretold and the patient would remove her clothing preparatory to the attack, which would last for five to ten minutes. After the convulsion she would remain in bed for about eight days. On October 20 she became frightened, and recognizing the oncoming of a convulsion, went to bed. Afterward the convulsions continued quite constantly at intervals of half an hour, and during that time she had taken no food or drink. The eyelids were partly closed, pupils contracted, supraorbital reflex absent. There was labial stertor, lips and tongue dry. At intervals there were marked spasms, but no screaming and no vomiting. On catheterizing a small quantity of urine was obtained, which showed abundant albumin, but no sugar; a few hyaline casts. The convulsions continued until death, which occurred Oct. 23, 1898. The clinic diagnosis was uremia. The post-mortem examination was made by Prof. L. Hektoen, the following day, and he kindly furnished me the following notes, with the above clinic history:

Anatomic diagnosis: Cysticercus cellulosæ of brain and spinal cord; adhesive pleuritis; bronchitis; bronchopneumonia; menstruation; lymphatic constitution (persistent thymus, enlarged intestinal follicles); parovarian cyst.

The general nourishment is good; rigor prominent; lividity posteriorly. The abdominal cavity is empty, lining smooth; pleural and pericardial cavities are empty; there are some fibrous adhesions over the left upper lobe. Tongue, pharynx and esophagus normal; thyroid gland of ordinary size; thymus gland present in the form of a mass of fat tissue, which corresponds to the thymus in shape and size and which contains quite extensive islands of glandular tissue. The lungs float and crepitate. In the right lower lobe is a small grayish-red area which is solid and granular, and around which the bronchi contain pus. The peribronchial lymph-glands are normal. The heart is normal as to its internal lining. The flesh is rather flabby and loose; weight 300 grams. The coronary vessels and aorta are smooth. The spleen weighs 150 grams, capsule smooth, cut surface red, rather soft. The kidneys weigh 300 grams, capsule free except over small areas, color red, cut surface moist, cortical markings distinct; in the center of one pyramid is a whitish area as large as a grain of wheat. The liver weighs 1375 grams, surface smooth, yellowish-red, consistence normal, lobular markings rather indistinct. The biliary apparatus is normal. The pancreas, stomach, small and large intestine are normal, except that in the lower part of the ilium the Peyer's patches show rather prominent follicles. The bladder and urethra show no changes. The uterus presents a virgin os; in the cavity is a loose mass of blood. In the center of the right ovary is a mass of clotted blood, 2 cm. in diameter, red, and in places adherent to the smooth walls of the cavity in which it lies. In the right appendage is a parovarian cyst as large as a hickory-nut. The serous surfaces of the pelvic organs are smooth. The scalp and skull show no changes. The dura is adherent to the pia at several small areas, on account of the presence of rather small cystic bodies between the two membranes, the bodies being lightly adherent to both.

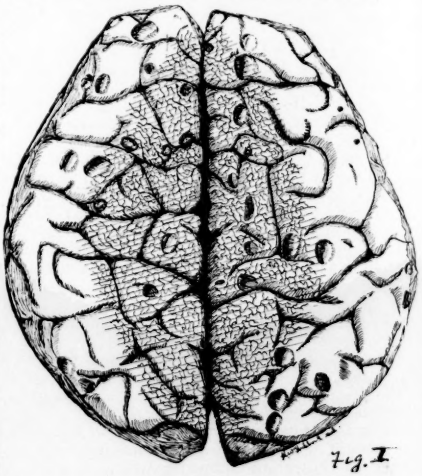


Figure 1.

The brain weighs 1250 grams. (Fig. 1.) Scattered over the entire surface are smaller and larger globular cysts with clear contents and thin walls, as well as shrunken, yellowish, irregular, granular, smaller masses. These cysts and masses are imbedded in the cerebral cortex, having made for themselves distinct depressions, clothed with pia, in which they lie loosely or slightly adherent. The largest of these cysts measure 2 cm. in diameter. There are perhaps ten or fifteen such masses scattered over the right occipital lobe. They also occur on the internal surface of the two hemispheres. The subdural space of the spine contains several flat, grayish, oval or rounded masses, similar to those on the cerebral surface. These are present in considerable numbers throughout the entire spinal subdural space.

Additional note.—There are six granular bodies attached to the inner surface of the dura. The adhesion of the dura to the pia is seen especially over the parietal and occipital lobes, and to a slight extent over the left frontal lobe. The fissures of the brain are obliterated by adhesions of the arachnoid and pia, which are thickened, opaque and grayish. The blood-vessels are distended with dark blood. The surface of the convolutions is somewhat flattened. The smaller cysts are usually situated in the fissures and sulci, while the larger ones, which have made deep depressions into the cortex, may extend throughout its entire thickness. On puncturing one of the medium-sized cysts, the contents is easily removed, consisting

of an elongated, curled-up, hard body and enclosed by a yellowish, delicate membrane. The smaller, irregular, grayish masses, on section, are filled with a cheesy or calcareous substance, surrounded by a thick wall of connective tissue. There are seven cysts over the right superior frontal convolution, from 1 to 2 cm. in diameter. Several smaller masses are scattered over the right middle and inferior frontal convolutions. Two cysts 2 cm. in diameter are situated on the right middle frontal convolution, four in the left precentral fissure, and several smaller masses in the left inferior frontal convolutions. They are not so numerous over the parietal lobes, but are quite large and situated near the fissure of Rolando, more pronounced on the right. Several bodies varying in size from a pea to 2 cm. in diameter are situated in the fissure of Sylvius on both sides. The temporo-sphenoidal lobes are less

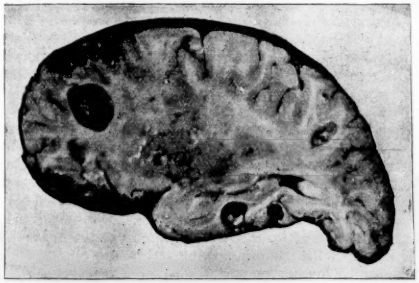


Figure 2.

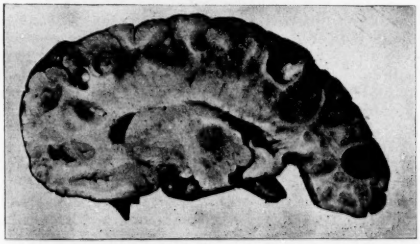


Figure 3.

Figures 2 and 3 are brain sections showing cysts in cortex and numerous calcareous bodies in basal ganglia.

involved, the bodies are present especially over the inferior convolutions. A number of the cysts are scattered over the base of the brain. One body, 2 cm. in diameter, is situated to the right of the optic nerve, making a deep depression in the frontal lobe, and another behind it, below the optic tract, surrounded by adhesions. (Figs. 2, 3.) Sections through the interior of the brain expose to view several dozens of these cysts. They are most numerous in the cerebral cortex of the frontal and occipital lobes, and especially of the right hemisphere. They vary in size from that of a pea to a large cherry. The smaller masses are calcified and surrounded by a connective-tissue capsule. These smaller masses are also scattered throughout the white substance, in the basal ganglia, optic thalami and corpus striatum. A cyst the size of a small cherry is situated in the posterior and lower portion of the corpus callosum, making an excavation for itself. Another, which is long and thin-walled, is in the right frontal lobe.

Spinal cord.—The dura is adherent at many points to the pia. Over the anterior surface of subdural space are scattered a number of flat, calcified, oval masses, more numerous in the dorsal and lumbar regions, imbedded in the pia, averaging 1 cm. in diameter. Those in the cervical region are small, somewhat larger than a pin's head. The posterior subdural space contains but a few of these masses, in the lumbar and dorsal regions.

Histologic examination.—For microscopic study, several cysts were removed from the brain, dura and spinal cord, imbedded in celloidin, and sections stained with hematoxylin and eosin, Van Giesen, etc. A globular cyst containing a somewhat elongated calcareous body was punctured, laid open, flattened between two slides, which on examination with the low power revealed several rows of hooks and the suckers of a tapeworm head.

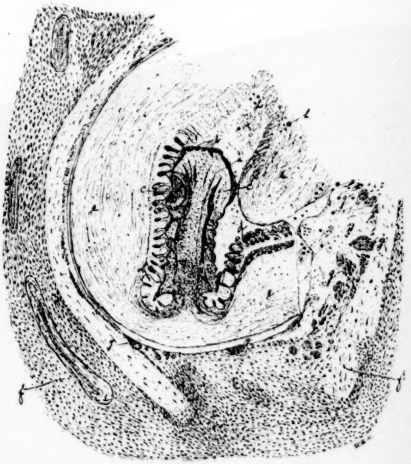


Figure 4.—*a*, Tapeworm head; *b*, hooks; *c*, suckers; *d*, folds; *e*, cyst wall; *f*, capsule of granulation tissue; *g*, giant cells; *h*, calcareous bodies.

Cysts of dura (Fig. 4).—In the center of a longitudinal section an elongated body is seen, resembling a tapeworm head. Several hooks can be made out, and beneath, on either side, are two suckers. The head arises by a kind of neck or base from the cyst wall, by which it is surrounded. The inner border of this wall is thrown into numerous folds, traceable to the sides of the head. The cyst wall is greatly thickened and has undergone calcareous degeneration. From the appearance and position of the head, it would seem, according to Leuckart,[11] that the head has protruded from its original position, and pushed itself into the cylindric body. The inner surfaces, formerly external, come in close contact, uniting and forming a solid mass, while the cuticular coat, mentioned above as folds, lies external. Scattered everywhere throughout the body and cyst wall are numerous

calcareous bodies of various sizes, resembling ova and staining deeply with hematoxylin. The whole cyst is enclosed by a connective-tissue capsule, composed largely of granulation tissue. Lying next to the cyst wall, the tissue is fully formed and mostly fibrous in structure, throughout which are scattered a large number of variously shaped giant cells. Besides the giant cells, the cells of the tissue are of two kinds: 1, small cells with deeply staining nuclei; and 2, larger cells with vesicular nuclei, which stain lightly and in shape

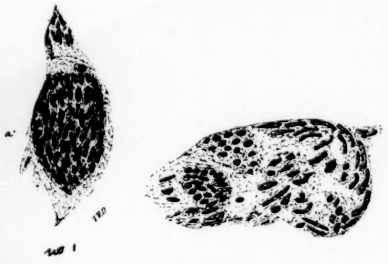
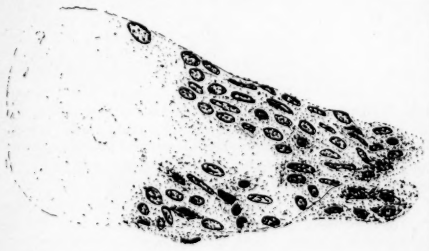


Figure 5.

No. 1.—Giant cell, nuclei rich in chromatin and arranged to long axis of the cell. 1-12 oil-immersion; hematoxylin and eosin.

No. 2.—A giant cell, with irregular-shaped nuclei collected in masses and evidently separating. 1-12 oil-immersion; hematoxylin and eosin.

are either oval, spindle-shaped or oblong. Here and there through the tissue are seen the remains of obliterated larger and smaller blood-vessels. (Fig. 5.) The giant cells are, as mentioned, situated in the fully-formed fibrous connective tissue, and are most numerous next to the cyst wall. Others lie within the cysts, or partly within by shoots of their cytoplasm. They vary in size and shape. Some are round or oval, others spindle-shaped and irregularly oblong. Many of the giant cells have quite a large number of nuclei, which



No. 3.—A degenerated giant cell; nuclei swollen, among which are seen deeply-stained nuclei. Hematoxylin and eosin.

stain deeply, are rich in chromatin, oval or spindle-shaped, and fill completely by their numbers the protoplasmic masses. In others the nuclei are less in number, stain poorly, are swollen, elongated and vesicular, and are irregularly scattered or concentrically arranged around the periphery. A deep-stained nucleus may, however, be seen among them. In the last-named cells there are evidences of degeneration. The protoplasm is occasionally vacuolated and stains faintly with eosin. The degeneration is more marked in those cells lying within the cysts. There are giant cells apparently separated into protoplasmic masses or in the act of fusion. Many of the smaller-celled masses lying in the connective tissue, and having deeply and lightly stained nuclei, resemble remains of giant cells, their protoplasm blending with the surrounding tissue. It would here be proper to state, since Hektoen[12] has called our attention to the fate of the giant cells in healing tuberculous tissue, that they undergo progressive changes and separate into small living cells, and which he further demonstrated experimentally in the rabbit's eye.[13] It would therefore suggest from the general appearance and arrangement of the giant cells here described, that the majority are undergoing a like fate. This statement I believe is justifiable for the reason that the giant cells are, as a rule, well preserved, while the surrounding tissue is quite old; that their nuclei are rich in chromatin, become elongated and arrange themselves to the long axis of the cells, and that small protoplasmic masses seem to separate from the giant cells and become enclosed by the surrounding tissue.

Transverse sections through a small cyst imbedded in the cerebral cortex and lying partly within a sulcus surrounded by pia, show the cyst completely degenerated. It is filled by a calcareous or cheesy-like substance, and encapsulated by a thick wall of fibrous tissue. Lying next to the cyst and embedded in the fibrous tissue are a small number of giant cells. Surrounding the capsule is a zone of granulation tissue, composed largely of small round, deeply-stained cells, throughout which are seen various-sized capillaries, with somewhat thickened walls. This tissue, which is identic with the pia, is adherent to the cortex. The change in the cortex is that also of a reactive inflammation. It is extensively infiltrated with small round cells, while next to the pia it is distinctly fibrillar. The blood-vessels are congested, and their walls thickened and infiltrated with small round cells. The lumen in others is obliterated. The changes of the ganglion cells are those due to pressure. Some have lost their outline, the nerve processes have disappeared and their nuclei are swollen. In others proliferative changes are present, the nuclei stain deeply, and there may be more than one nucleus in a cell.

An examination of sections of another somewhat larger, globular cyst, with clear contents and also taken from the cerebral surface, shows no head or hooks. The center is divided into several smaller cysts, throughout which are scattered a number of calcareous bodies. The cyst wall consists of two layers, an outer cellular attached to the capsule, and an inner, fibrillar, delicate-like membrane.

Compound cysts,[14] like this one, have been reported quite frequently. They usually are irregular in shape, and heads are but rarely found—C. racemosus of Zenker, who first described them.

Spinal cord.—The central canal is obliterated, and around its position are scattered a number of round, deeply-stained cells. The blood-vessels of the gray and white matter are distended with blood, and their walls are thickened. The ganglion cells as well as the nerve-fibers of the white substance are normal. The smaller and larger blood-vessels of the pia mater are congested, more like thrombosed. Around many of the blood-vessels are collections of small, round cells. To one side of the pia is seen one of the oval flat masses. It is dense and homogeneous, and throughout are scattered a number of nuclei.

Sections of the thymus show, on microscopic exam-

ination, a number of follicles imbedded in fat tissue. It is composed of closely-packed, deeply-staining cells. Many blood-vessels are scattered throughout these islands, and in the fat tissue. They are greatly distended with blood and contain quite a large proportion of leucocytes. The larger vessels in the fat tissue are thickened and some evidently contain thrombi, which are organizing.

Summary.—It is evident from the foregoing that we are here dealing with a long-standing infection from the larva of tenia solium. While it is impossible to say how long the cysticerci have been present in the brain, we may infer from the clinic history, as well as from the examination of the cysticerci, that it is of at least twelve years' duration, if not longer. Cases have been reported where the bladder-worm has caused cerebral disturbance for fifteen years. Marchand reported a case of over ten years' standing. In what manner the ova gained entrance in this case, I am unable to say. There is no history of tapeworm. I question, however, whether the infection is of American origin, for the reason that the convulsions began when she was 16, four years before she came to this country. Besides, the few cases reported were mostly in Germans.

Furthermore, Stiles states[15] that he has yet to see a "pork" tapeworm of American origin. He believes those cases reported in the literature as tenia solium are really, from the general description, the "beef" tapeworm—tenia saginata.

I believe we may safely conclude that the convulsions are the result of the constant pressure and irritation of the cysticerci on the brain, and which (finally) caused death; that the cysticerci acting as foreign bodies produced a chronic reactive inflammation of the brain and meninges; and, finally, that the giant-cells formed around these bodies participate in the formation of the capsules.

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587 S. Halsted Street.

PROPRIETARY PREPARATIONS.*

WHAT SHOULD BE THE ATTITUDE OF THE MEDICAL PROFESSION?

BY CHARLES C. YARBROUGH, M.D.

DETROIT, MICH.

This is a question of vital importance to the medical profession, and although it has been discussed and re-discussed in various medical societies and in numerous medical journals, its solution has not yet been accomplished. It is high time some definite stand were being taken in the matter. This free and indiscriminating use of proprietaries is becoming a menace to the welfare of the profession, working as it is irreparable injury financially and professionally. I believe it is safe to assert that the great majority of physicians of this country have given the subject such little analytic thought and study that they do not properly appreciate the true significance of the term "proprietary" in this application. Some physicians are caustic opponents to the professional use of proprietaries, many even letting their prejudice lead them to vituperative denunciations of this class of remedies without insomuch as making an exception. Others go to the other extreme and give heed to the extravagant claims of interested promoters and prescribe and sanction without distinction all ready-prepared and concocted compounds whatsoever. These two classes of extremists do not see that one proprietary differs from another, but class them all in the same category. Why is this great diversity of opinion? The answer lies in what has been intimated above, that physicians are too careless and indifferent about the character of medicinal preparations and have not given the subject the proper thought that would lead them to definite and rational conclusions.

The number of proprietary preparations for which the physician's support is solicited and continually being urged upon him is simply prodigious. That all these preparations are worthless and without the sphere of ethic recognition is no more true than that all of them possess extraordinary virtues and may be used with professional impunity is true. Many of them are ideal preparations and are strictly in harmony with the spirit of the Code of Ethics; for while they are "proprietary" in the strict meaning of the term, they are not "proprietary" in the odious sense in which this word has come to be used. They are manufactured, advertised and marketed in such a way as to be in perfect harmony with scientific work and may be freely used by scientific and ethic physicians without a breach of professional ethics or laying themselves liable to culpability.

On the contrary, the majority perhaps of proprietaries are of such a nature that they are well characterized by the word "nostrums" and are worthy of the profession's severest condemnation and scorn. They are an insult to the profession, depending as they do on mystery, credulity and secrecy for their employment. The physician's endorsement, written or otherwise, of these preparations is solicited and obtained for the purpose of promoting their sale among the laity. The unscrupulous manufacturers of such nostrums are out for filthy lucre, regardless of what methods are necessary to obtain it. Their principles are subservient to the desire to accumulate. What untold injury has been done the profession by carelessness of physicians in giving recognition to these unworthy and illegitimate concoctions!

A physician owes it to his patient to employ the most agreeable and the most palatable remedies possible, consistent with efficacy. The days of nauseating, disgusting, crudely prepared drugs are forever gone. It has been demonstrated over and over again that disagreeableness in a medicine is not a necessary factor in efficiency. Physicians know this to be true. Their patrons have learned it and rebel at the idea of obnoxious mixtures, so much so that in employing a physician, strong preference is almost invariably shown for the one who gives his remedies in the most elegant and palatable form. It is enough for the patient to suffer the disease without having to force down vile, nasty-tasting medicine when the same may be administered in a palatable form with equal effi-

*Read at the meeting of Michigan State Medical Society, Kalamazoo,

ciency. On the other hand, the physician is indebted to his profession, and duty demands that he accord it the thoughtful consideration commensurate with its dignity and in keeping with the fundamental principle which has been instrumental in its being classed as one of the learned professions. Every time a physician prescribes a "nostrum" he antagonizes his profession's best interest. He adds one blot to the fair name of his profession, and every blot so added detracts from the honor and respect which it is his bounden duty to promote. The prescribing of "nostrums," semisecret, or secret, is a sad reflection on the physician's knowledge of legitimate materia medica.

Every pharmaceutic manufacturing concern has some one or more particular preparations which it has made an object of special research and study and in the elegance and excellence of which it takes especial pride. Many of these preparations, although proprietary, are indispensable to refined practice. This leads us to seek a rational definition of the word "proprietary" and a better understanding of the subject, to the end that a rule may be formulated by which a physician may be properly guided. I hold that the word "proprietary" in this connection signifies what it does anywhere else. It signifies some property in, but not necessarily exclusive ownership. For example, the "Columbia" bicycle is proprietary, the manufacturers of which own property in their special make of bicycle, but do not have exclusive ownership of bicycles in general.

I would define a proprietary preparation as one that has a proprietor or owner—a person, firm or corporation that manufactures the preparation according to a certain particular method and that controls the output of the preparation made according to his or its *particular process*. The proprietaryship is based upon some peculiarity of composition or manufacture, on a distinctive name (copyrighted or not), or on a patent.

Proprietaries may be divided into three distinct classes: those of secret, semisecret and nonsecret composition. And these may be further divided into three subdivisions, according to the way they are offered for sale: 1. Those advertised to the laity only. 2. Those advertised to the profession only. 3. Those advertised to both the laity and profession.

I do not wish to antagonize in this paper any particular preparation or manufacturer, and hence I hesitate to mention any selected ones as examples. My desire is to outline the correct underlying principles that should govern medical men in the use of proprietaries and leave it to each individual to draw his own conclusions as to the fitness and eligibility of particular preparations. However, illustrations add force to argument, and I hope I may be pardoned for mentioning a bare few to render my position more perspicuous.

Nervura is secret and advertised to the laity only.

Resinol is secret and advertised to the profession only.

Psychine is secret and advertised to both the laity and profession.

Hood's sarsaparilla is semisecret and advertised to the laity only.

Sanmetto is semisecret and advertised to the profession only.

Ozomulsion is semisecret and is advertised to both the laity and profession.

Scott's emulsion is non-secret and advertised to both the laity and profession.

Liquor sedans is non-secret and is advertised to the profession only.

Are not all these preparations proprietary? Does not each firm own property in its respective preparation? If not, why should they exercise such assiduity and spend large sums of money in advertising them to the best advantage? Since these are all proprietary, is there a physician who can not see that, in important respects, one differs very much from another? None is so blind as he who will not see. Is it policy, not to say ethic, for a physician to prescribe proprietaries without distinction? On the other hand, is it just to denounce proprietaries without exception?

It seems from this classification that it is an easy matter to select that class of proprietaries which a physician should prescribe and if a preparation can not be brought into this class it is not worthy of his recognition and is not manufactured by its promoters for the physician of intelligence and learning. No practitioner will admit that it is rational and scientific to prescribe a preparation of secret or even semisecret composition. This then narrows the question down to the point of strictly pharmaceutic preparations, including only those of which excellence of quality and elegance of preparation can be claimed. This obviates the brazen, unfounded and oftentimes ridiculous claims which are characteristic of some nostrum promoters, for intelligent physicians knowing the composition of a preparation know about what to expect of it. There is no dearth of eligible preparations. Of the many these may be mentioned: Gardner's syrup of hydriodic ecid; Chas. Marchand's hydrozone; P., D. & Co's euthymol; Stearn's kasagra; Wyeth's boracetanile, etc. The firms manufacturing them do not have a monopoly of these remedies, which would render them wholly unethic, but only possess such property in the preparations as reverts to them from excellence obtained by some peculiarity of manufacture. This however is considerable, as their wide use indicates and the extensive advertising which it warrants.

From the foregoing the following conclusions are drawn:

A physician can not consistently prescribe or sanction the use of any proprietary whose active ingredients are not stated and their exact amounts given, Secrecy of active constituents is then the great dividing line. But there are a number of preparations whose composition is openly published but are ineligible and unfit for professional recognition. These comprise all of such nature except those which are not advertised to the laity.

Now, who will dispute that this is ethic and scientific? If proprietaries must be prescribed, and there is scarcely a physician who does not use one or more in his practice, is not this a safe rule by which to be guided:

Do not prescribe or sanction the use of any preparation by the profession which does not give an entire formula of its active ingredients and their proportions and is advertised only in proper professional channels.

Vita Propria of Cells of Periosteum.—Grohe, in an extensive series of tests of flaps of periosteum taken from animals twenty-nine to one hundred hours post-mortem, has shown that the periosteum retains its vitality and proliferating power for this length of time and behaves exactly like still warm flaps when transplanted.—*Virchow's Archiv.*, clv. 3.

Association News.

AMERICAN MEDICAL ASSOCIATION.

Fiftieth Annual Meeting, held at Columbus, Ohio, June 6–9, 1899.

OFFICIAL MINUTES OF THE GENERAL SESSIONS.

(*Concluded from page 1341.*)

Dr. T. J. HAPPEL made the following supplementary report on behalf of the board of trustees:

The board of trustees, in considering the various matters referred to them, would report that they have found much difficulty in finding the proper sections of our constitution and by-laws under which to examine them; hence, we would recommend that a committee of three be appointed to revise the constitution and by-laws of this ASSOCIATION and to codify and arrange them properly, and when the committee shall have completed its work, the editor of the JOURNAL print a sufficient number of copies of the same and have them ready for distribution at the next meeting of this ASSOCIATION.

On motion, the report was adopted.

Your board of trustees, to which was referred the resolution of Dr. Tuckerman of Ohio, in regard to the appointment of a committee of three on national legislation, would recommend the adoption of the resolution, and would advise that not exceeding $250 be appropriated for the use of said committee, to be expended on vouchers approved by the local member of the board of trustees, who, under a former action of this ASSOCIATION, must be the District of Columbia member of this national legislative committee, with one member from Baltimore and one from Philadelphia.

On motion, the recommendation of the board of trustees was concurred in.

COMMITTEE ON DEPARTMENT OF PUBLIC HEALTH.

Dr. U. O. B. WINGATE, Milwaukee, Wis., presented this report, as follows:

Your committee has only a short report of progress to offer at this meeting. At the last meeting, held in Denver, a somewhat full and lengthy report was submitted in printed form. Since that meeting, as is well known, Congress has held a short session and devoted its time largely to the consideration of matters relating to the late war and our relations to the new possessions. Matters pertaining to national public health legislation have become crystallized, so to speak, into two propositions in the form of two bills—one known as the "Cafferey-Hepburn bill," which provides only for extended quarantine powers of the marine-hospital service, and the other the "Spooner bill," which has been endorsed by this ASSOCIATION at its last two meetings.

It is unnecessary to refer to the merits of this measure, as they are well known—suffice it to say that since the last meeting much has been added to public sentiment in favor of this bill, and, as stated in the last report, it has been endorsed by the American Public Health Association, the New York Academy of Medicine, the New York Board of Trade and Transportation, the New York Chamber of Commerce, and since the last meeting it has received the endorsement of the N. Y. State Medical Association, which body has appointed a committee, with Dr. Stephen Smith as its chairman, to co-operate with your committee in aiding its passage. It has also received the endorsement of the Conference of State and Provincial Boards of Health of North America, recently convened at Richmond, Va., and it has also been endorsed by many medical societies throughout the country, as well as business organizations. Your committee does not hesitate to state that in its judgment no bill of its nature ever before Congress has received the support that this bill has received and is receiving.

Your committee is of the opinion that there have been two prominent causes in the delay of the passage of a measure to create a national bureau of public health, one the diversity of opinion existing in the profession as to the composition and details of such a measure, the other the lack of information on the part of members of Congress concerning the importance of such legislation, and it is hoped that these two obstructions have been largely overcome, and if the profession will now stand firm, and shoulder to shoulder, in favor of this bill, which has been endorsed by such a large number of the medical and business organizations, individual medical men and sanitarians throughout the country, it is believed that the "Spooner Bill" will become a law during the next Congress.

At the last meeting of this ASSOCIATION, your committee pointed out the need of having some one watch with care the progress of the bill, and that money was needed to carry on this work. Your chairman signified his willingness to give his time to this service if his actual expenses could be paid. It was recommended that $1000 be set aside for the use of your committee. That matter was referred to the board of trustees and that body set aside $200 for this purpose. But one visit to Washington was necessary during the last extra session of Congress, and a part of the expenses of that trip was borne by the Wisconsin State Board of Health. There was a small bill for printing, so that about $75 has been expended, hence there is about $125 left for the use of your committee. Your committee would strongly urge that at least $500 in addition be set aside, or so much thereof as may be necessary, for this purpose, as in all probability this will be the last call. Your committee believes that victory is in sight, and with a little more financial aid and the active co-operation of the individual members of the ASSOCIATION, success will crown our efforts before our next meeting.

If we are are not successful it will be the fault of those who fail to co-operate with those who laid the foundation, for with the support of the medical, sanitary, and business organizations, as well as the great majority of State boards of health and the leading sanitarians of the country, such a measure will only be defeated by a lack of harmonious effort in influencing our members of Congress, and the activity of the few who oppose the many. Respectfully submitted,

[Signed.] U. O. B. WINGATE, M.D., chairman.

Dr. BISHOP of Pennsylvania—"I move that the report of the committee be adopted and the money appropriated as suggested."

Seconded and carried.

RESOLUTIONS OF THANKS TO DR. GIHON.

The following preamble and resolution were offered:

WHEREAS, Dr. A. L. Gihon, who for so many years has served with earnest enthusiasm as chairman of the Rush Monument Committee, has resigned the office; therefore be it

Resolved, That the AMERICAN MEDICAL ASSOCIATION accept the resignation with extreme reluctance and regret, and tender to Dr. Gihon its sincere thanks for the efficient manner in which he has discharged the duty of the onerous office;

Resolved, That this preamble and resolution be spread upon the minutes and a copy of the same be sent by the secretary to Dr. Gihon.

On motion, the resolution was unanimously adopted.

RESOLUTION CONCERNING REGISTRATION.

Dr. T. J. Happel of Tennessee—I have a resolution which I wish to read, and desire to make a motion to adopt the same. The resolution is as follows:

Resolved, That Dr. Wm. B. Atkinson be appointed to take charge of the registrations at the annual meetings, until otherwise ordered by the ASSOCIATION, and to that end the committee of arrangements shall advise with him before the meeting and he shall go to the place of meeting at least one day in advance to perfect arrangements for registration. For this service he shall receive annually from the treasurer the sum of $100 and his expenses.

Seconded and unanimously carried.

REPORT OF EXECUTIVE COMMITTEE.

THE PRESIDENT—The next thing in order is the report of the executive committee, which will now be presented.

JUNE 8, 1899.

Your committee would respectfully report as follows:

It has carefully considered the topics mentioned in the president's address, and would advise as follows:

1. In regard to a permanent location at Washington for the meetings of the ASSOCIATION, your committee recommends that no change from the present plan be adopted.

On motion, this section of the report of the executive committee was adopted.

2. In regard to the clinics and entertainments interfering with the work of the ASSOCIATION, your committee recommends that the ASSOCIATION direct that such be avoided in the future.

On motion, this section was adopted.

3. In regard to a traveling assistant secretary to visit medical societies and secure membership, your committee advises that the solicitation of subscriptions to the JOURNAL should be left to the trustees, as heretofore, and that membership in the ASSOCIATION is better advanced by the efforts of delegates in their own societies than by a paid commercial agent.

A motion to adopt this section was carried unanimously.

4. In regard to the editor of the JOURNAL acting also as secretary of the ASSOCIATION, your committee recommends that it is desirable and that the plan be adopted if the amendment to the constitution and by-laws is accepted.

5. In regard to the recognition of delegates from other bodies than the State societies, that relates to the constitution and by-laws and the committee is not prepared to advise in the matter.

6. In regard to the memorials to Congress, referring to tuberculosis, your committee offers the following preamble and resolution:

REPORT OF EXECUTIVE COMMITTEE ON TUBERCULOSIS.

WHEREAS, From carefully prepared statistics it is found that of the deaths from all causes between the ages of 15 and 60 years, one-third result from tuberculosis, and that one in every fifty persons has this disease; and,

WHEREAS, Competent authorities claim that under proper treatment from at least one-fifth to one-quarter of those affected by tuberculosis may be cured; and,

WHEREAS, The European governments are actively engaged in endeavors to stamp out this disease, while in the United States nothing has as yet been done by us as a nation in this important work; therefore, be it

Resolved, That the president appoint a committee of five with power to add to the number, who shall prepare a report on the nature of tuberculosis; its communicability and prevention; the more effectual means of controlling the spread of infection and of educating the people in personal hygiene, so as to lessen the chances of their becoming tuberculous and to increase the prospects of their recovery; the advisability of establishing national and State sanatoria, and such other matters as may be pertinent to the subject.

Resolved, That this committee shall present this report to the Congress of the United States and to the legislatures of the various States of the Union and urge upon them that appropriate measures be speedily taken.

On motion, this section was adopted.

REPORT OF EXECUTIVE COMMITTEE ON VACCINATION.

7. In regard to the subject of compulsory vaccination, your committee offers the following preamble and resolutions with recommendations of their adoption.

WHEREAS, Before the discovery of vaccination smallpox was one of the most dreaded scourges of the earth, causing in epidemics as much as one-half of all deaths in a year; and,

WHEREAS, It has been proven by years of experience that smallpox can be stamped out by the efficient use of vaccination, and,

WHEREAS, When prejudice has prevented its employment in diverse communities for periods of years, these communities have in many instances been almost exterminated by epidemics of smallpox; and,

WHEREAS, Certain well-meaning but fanatical persons have, for some time past, been endeavoring to excite a prejudice against vaccination, and may, if they are not checked, succeed in rendering the entire country susceptible to an epidemic of smallpox such as has visited and laid waste the various isolated communities where vaccination has been abandoned or never adopted; therefore, be it,

Resolved, That the AMERICAN MEDICAL ASSOCIATION most strongly urges the adoption by local boards of health of laws requiring compulsory vaccination, and deprecates in the strongest way the efforts of those who are endeavoring to secure the abolition of compulsory vaccination; and,

Resolved. That a copy of this preamble and resolutions be sent to every health board in the country.

On motion, this section was adopted unanimously by a rising vote.

8. In regard to the spread of syphilis, the matter was referred to the delegates to the international congress at Brussels, in September, 1899, which have been appointed by the United States Government on nomination by the president of this ASSOCIATION, the committee to report next year, as suggested in the address.

In connection with this a resolution was offered that the ASSOCIATION requests the United States Government to make some appropriation for the expenses of the delegates, as is common on such occasions.

On motion, this section and the resolution were adopted unanimously.

9. The resolution offered by the Ohio State association in regard to the appointment of a permanent committee on national legislation has been fully considered by your committee, and Dr. L. B. Tuckerman and Dr. U. O. B. Wingate appeared before the committee in regard to the same. (For resolution see previous day's minutes.) Your committee recommends the adoption of the resolution with the proviso that one member of the committee should reside in Washington, the others elsewhere, and that the matter be referred to the trustees, as there may be some expenditure of money connected with it. (See President's Address, JOURNAL, June 10.)

10. Your committee report that the report of the secretary was satisfactory and requires no action.

11. The Section on Materia Medica sent a resolution to the executive committee, which was duly considered and is recommended for adoption by the ASSOCIATION. The resolution is as follows:

WHEREAS, The Decennial convention for the revision of the Pharmacopeia meets in Washington in May, 1900, and,

WHEREAS, The AMERICAN MEDICAL ASSOCIATION has the right to send five delegates to that convention; therefore, be it

Resolved, That the Section on Materia Medica, Pharmacy and Therapeutics requests the ASSOCIATION to send delegates to this convention and suggests the names of Dr. George F. Butler, Dr. Hobart A. Hare, Dr. W. B. Hill, Dr. F. E. Stewart, and Dr. R. G. Eccles, to the president of the ASSOCIATION as suitable gentlemen to take care of the interests of the ASSOCIATION in the same.

The executive committee recommends that the committee be sent to the revision convention, and that the names recommended be accepted.

On motion, the recommendation of the executive committee was concurred in.

12. In view of the fact that the last published edition of the constitution and by laws was dated March 28, 1891, and is imperfect, not containing some recent changes and ordinances, as, for instance, the organization of the executive committee of the Sections and the general executive committee, the election of officers of Sections by the Sections, etc., and it is impossible to know of many provisions of the same accurately, your committee recommends that the ASSOCIATION direct the trustees to issue a revised edition at the earliest possible date, containing also a list of the members of the ASSOCIATION, as provided by an ordinance. (Page 18.)

Dr. BISHOP of Pennsylvania—"I move that it be adopted, and that in addition there be printed the Code of Ethics and the interpretations placed upon it by the AMERICAN MEDICAL ASSOCIATION." The motion was seconded and carried.

13. Your committee will call attention to the fact that there is no provision on the daily program for the reception of the report of this committee, although the ASSOCIATION ordered last year that this be done, and requests that the ASSOCIATION direct the secretary to have the same inserted in the future as early in the day at each meeting as possible, in order that the matters reported on may be duly considered and acted upon.

Dr. BISHOP of Pennsylvania—"I move that it follow the reading of the minutes." Seconded.

The following was offered as an amendment to the motion: That there be a general order, after the reading of the minutes, for the reports of the committees. The amendment was accepted.

It was suggested that it would hardly be right for the report of the executive committee to be placed among the reports of committees in general, since the executive committee is constitutionally organized. It was also suggested that the executive committee be especially mentioned on the program, and a motion to amend to this effect was made, seconded, voted on, and carried.

Dr. STARLING LOVING—"I am requested by the president to announce that the next order of business will be the Address on Medicine, by Prof. J. C. Wilson of Philadelphia. Following Dr. Wilson's address, Dr. Sternberg, surgeon-general of the army, will, by the aid of the stereopticon, illustrate views of hospitals, the hospital ship *Relief*, and the camps of the American-Spanish War. (See JOURNAL, June 10, p. 1277.)

A resolution from the Ophthalmological Section was read by Secretary Atkinson and adopted. (For resolution see minutes of previous session.)

REPORT OF NOMINATING COMMITTEE.

The report of the nominating committee was read. It appeared in the JOURNAL, June 10, p. 1341; additions, p. 1375.

Dr. J. C. WILSON, Philadelphia, then delivered the Oration on Medicine, at the conclusion of which Dr. E. Fletcher Ingals, Chicago, moved that a vote of thanks be extended to Professor Wilson for his admirable address (see JOURNAL, June 10, p. 1277), which was seconded and unanimously carried.

The president then introduced Surgeon-General Sternberg, who gave a stereopticon lecture.

Dr. BISHOP of Pennsylvania moved that the thanks of the ASSOCIATION be extended to Surgeon-General Sternberg for presenting the pictures, and that he be requested by the secretary to write out his remarks embodying substantially his lecture. Seconded and carried.

At this juncture the retiring president, Dr. Jos. M. Mathews, appointed Drs. Daly and Marcy to escort the president-elect to the chair, and Dr. Mathews introduced his successor in the following language:

"Dr. Keen needs no introduction from me. His distinguished services have rendered his fame world-wide, and it affords me very great pleasure to yield the chair to so distinguished a man." (Applause.)

Dr. W. W. KEEN, in accepting the presidency, said:

"I wish to assure you, ladies and gentlemen, and members of the ASSOCIATION, of my most sincere thanks for the honor that you have done me in electing me president. To follow such a line of distinguished predecessors, beginning with Nathaniel Chapman, fifty-two years ago, and ending with Mathews, at present, I am sure the responsibility of such a position in presiding over an ASSOCIATION which represents the entire profession of the country is not one to be lightly undertaken. I return you, again, my very sincere thanks." (Loud applause.)

TO AMEND CONSTITUTION.

The secretary read the following, which was offered by Dr. Dudley S. Reynolds of Louisville, Ky.: Proposition to amend article 2 of the constitution, by adding to the qualifications of membership in those societies eligible to send delegates to this ASSOCIATION. After the words "Marine-Hospital Service of the United States," at the conclusion of the second paragraph; provided, however, that no State, county or other auxiliary body sending representatives shall receive into its membership any one who may after 1900 have received the degree of doctor of medicine on less than four years of graded instruction or an equivalent requirement. (Laid over for one year.)

The secretary read the following, on which no action was taken:

The regular decennial convention for the revision of the United States Pharmacopeia will be held in Washington, May 4, 1900. It is important that the AMERICAN MEDICAL ASSOCIATION should have a voice in regard to what shall be made official therein. This ASSOCIATION is entitled to a delegation of five to the convention, and it is of the greatest importance that our delegates go prepared to express the wishes of the ASSOCIATION in this connection. Therefore, the discussion of the pharmacopeia will be continued by the Section on Materia Medica, Pharmacy and Therapeutics in its afternoon session at 2 o'clock to-day.

On motion, the ASSOCIATION then adjourned until 11 o'clock Friday morning.

JUNE 9—FOURTH GENERAL SESSION.

The ASSOCIATION was called to order at 11 A.M., by the president.

The minutes of the previous session were read by the secretary, and on motion of Dr. Frances Dickinson of Chicago, they were approved as read.

Dr. I. N. LOVE moved to reconsider section 12 of the minutes of the executive committee, just read, which provides for the printing of a list of the members along with the revised constitution and by laws. Seconded and carried.

Dr. I. N. LOVE.—"I now move, Mr. President, that that part of section 12 which provides for the printing of a list of the members of the ASSOCIATION in conjunction with the revised constitution and by-laws be eliminated. I do this because the board of trustees, after thorough and free discussion of the question, have arrived at the conclusion that it would not be to the best interests of the ASSOCIATION to have such a list published, as it might be used improperly and commercially. I make this motion on behalf of the board of trustees."

Dr. DUDLEY S. REYNOLDS.—"I rise to second the motion of Dr. Love."

THE PRESIDENT.—"You have heard the motion of Dr. Love, saying that the board of trustees feel that it is not desirable to have a list of the members of the ASSOCIATION published in connection with the revised constitution and by laws. You will remember that the executive committee recommended in their report of yesterday the publication of such a list, and it is the desire to have the section pertaining to the publication of this list eliminated."

Dr. LEARTUS CONNOR, Detroit—"The minutes of the executive committee of yesterday have provided for the publication of a revised constitution and by-laws, etc. It does not say anything as to what shall be done with them. Therefore, I move that to every member of this ASSOCIATION a copy of these documents be mailed when they are presented, and further, that every year as new officials are inducted into office, the members shall be supplied with copies of these documents." Not seconded.

Dr. I. N. LOVE—"It seems to me, the board of trustees should exercise their judgment with regard to the publication of the list of members in connection with the revised constitution and by-laws."

Dr. GEORGE H. SIMMONS, Chicago—"I would like to ask whether this is a standing resolution or not, or is it in the by-laws? If a standing resolution, it seems to me the ASSOCIATION can rescind it. The item of expense should be considered in connection with the publication of such a list with the revised constitution and by-laws, but a more important point to be thought of is the commercial use that can be made of this list. It is a list that we could sell for $25 apiece, if we would do it. There are many firms in this country that would gladly pay that amount for this list, and some of them have repeatedly offered to do so. The question I ask is as to whether this is a standing resolution or not. If so, can it not be rescinded at this meeting?"

THE PRESIDENT—"It is a standing resolution, Dr. Simmons, according to my knowledge."

Dr. DUDLEY S. REYNOLDS—"If we consult the first section of the by-laws, we will find that the ASSOCIATION can alter, amend, and change this matter in general session by a three-fourths vote of all those present who are entitled to vote."

Dr. CHARLES H. HUGHES, St. Louis—"As a member of the executive committee, I desire to state to the members present that all of these objections have been considered by your committee, particularly the so-called commercial objection raised against the publication of a list of members of this ASSOCIATION. I would most respectfully submit, Mr. President, that we have nothing to do with the commercial interests of the United States. We are not engaged in commercialism; we are not conducting any commercial enterprise. We are considering the interests, the welfare, the comfort and necessity of this ASSOCIATION. Objection is raised that certain proprietary houses in the United States, interested in

catering to the AMERICAN MEDICAL ASSOCIATION, will get our names and addresses for nothing, when they might pay the ASSOCIATION for it, or when perchance they ought not to have it. What is that to us? The list can be published, giving simply our names and States, without our home address, or post-office address. The value of such a list to the members of the ASSOCIATION is more than counterbalanced and overwhelmed by this little objection. I stand here to defend the work of the executive committee."

Dr. I. N. LOVE—"Officially, I represent the board of trustees in this matter, and in the opinion of the board it is thought wise not to publish this list of members in the book referred to, for the same reason that the average newspaper or journal does not desire to have its list of subscribers published for the benefit of its competitors. We are engaged in the business of publishing a medical journal. Every member of this ASSOCIATION owns stock in it, and for that reason it does seem to me that this list ought not to be published."

Dr. LEARTUS CONNOR, Detroit—"We do not want a list of the subscribers of the JOURNAL published, but the members of the ASSOCIATION. We want to know who are with us, and we want them to know that we are with them, and personally I can see no harm in publishing a list of every member of the ASSOCIATION, particularly those that serve us so well as officers. I have many times wanted such a list, and I believe it would be useful to the members. The American Ophthalmological Society publishes a list of its members, giving their names and addresses every year, for the purpose of helping themselves. The same thing applies to us. We want a list of the members of this ASSOCIATION to help ourselves and the JOURNAL, too."

Dr. BISHOP of Pennsylvania favored the adoption of Dr. Love's motion, while Dr. Bishop of New York advocated the publication of a list of the members as recommended by the executive committee.

There being no further discussion, the president put the motion of Dr. Love relative to eliminating a portion of section 12 of the minutes as read, and it was carried.

Some doubt having arisen in the minds of members as to whether this motion was really carried or not, a motion was made and carried to reconsider the vote taken on Dr. Love's motion, whereupon Dr. Love then moved that the whole question be laid upon the table, and this motion was carried.

REPORT OF EXECUTIVE COMMITTEE.

Dr. BULKLEY reported on behalf of the executive committee, as follows:

1. The committee of the delegates from the United States to the Congress for the Prevention of Syphilis and the Venereal Diseases, to be held in Brussels, Belgium, in September next, would respectfully suggest to the ASSOCIATION the desirability of taking the necessary action to secure an appropriation from the United States Government to meet the necessary expenses of its delegation to the aforesaid congress. Your committee feels that this ASSOCIATION will readily appreciate the responsibility involved in properly representing, not only our country, but also this great ASSOCIATION at the forthcoming congress, and the imperative necessity of an appropriation which shall comport with the importance of the questions to be considered by the congress, and with the dignity of the United States, as well as that of this honorable body.

Dr. BISHOP of Pennsylvania moved that the ASSOCIATION take such action as is necessary to secure the appropriation mentioned in the report of the executive committee. Seconded and carried.

2. With reference to the appointment of another member of the committee on gold medal, which report is not signed this year because no essay has been presented to the committee of sufficient merit to be awarded the medal, your executive committee should have appointed another member of this committee on prize competition in place of the member from San Francisco, whose term of office expires, but through haste, your committee failed to do this. Your committee, therefore, asks to be allowed to appoint that other member.

On motion, the executive committee was empowered to select this member of the committee mentioned.

3. With reference to the time consumed in the work of the Sections, your committee spent considerable time in looking into this matter, having had a subcommittee working on it. There is one suggestion which we desire to spread on the minutes, and one resolution which we want passed. We found no less than 561 papers announced for this meeting in the different Sections. We find, after careful inquiry from those who have attended the different Sections, that not one-half of those papers were actually read. The work of many Sections has become so congested that there is not proper time for discussion. Some eighty-three papers were presented in the Medical Section, seventy-nine in another, and sixty-four in another. Your executive committee wishes to call your attention to the following by-law: "It shall be the duty of every member of the ASSOCIATION, who proposes to present a paper or report to any one of the Sections, to forward either the paper or a title indicative of its contents and length (not to exceed twenty minutes in reading), to the secretary of said Section, at least one month before the annual meeting at which the paper or report is to be read." Your committee found that the Medical Section gave some admirable abstracts of the papers presented to it in the published official program, whereby those attending the Section could come prepared to discuss papers intelligently. The committee considers that if papers are abstracted beforehand and published after the manner mentioned, the members are more likely to discuss them. So your committee offers another substitute, which is simply this:

Resolved, That no paper shall be placed on record for the consideration of any Section unless an abstract or a précis of not less than 50 or not more than 300 words, accompanies the title and is placed in the hands of the chairman or secretary of the Section at least thirty days before the time of meeting of the Section.

Your committee desires further to call the attention of the ASSOCIATION to this work of the Sections in order that more care may be exercised in the selection of papers hereafter, and it was agreed that probably not more than thirty papers should be considered desirable for any one Section of the ASSOCIATION during the meeting. The British Medical Association limits the number of papers to twenty-five for each section; it also requires an abstract of the papers sixty days before the time of meeting. Your committee merely suggests this, and does not ask that the thirty-paper-limit be adopted. But we ask the adoption of this resolution, that no papers shall be placed on record for the consideration of any Section unless an abstract of not less than 50, or more than 300 words, accompanies the title, and said abstract placed in the hands of the chairman or secretary at least thirty days before the meeting. Your committee moves the adoption of this resolution as presented.

On motion, this action was concurred in.

There was another resolution passed before, which is really covered by that, and it is to this effect, that hereafter no name shall be printed on the program unless the title of the paper is announced. Your committee found twenty or thirty names throughout the program without the titles of papers announced, and the other resolution you have passed covers this.

Dr. DUDLEY S. REYNOLDS asked Dr. Bulkley if he would kindly add to the resolution, "and who is not a member of this ASSOCIATION."

Dr. G. C. SAVAGE, Nashville—"I believe our by-laws prohibit us from introducing new business on the morning of the fourth day, and this is to prevent something from being introduced which might be detrimental to the ASSOCIATION. It is well known that on the morning of the fourth day the attendance of members is very small, and there is very little to prevent any man from introducing a resolution and having it adopted when but few members are present, and it is to avoid such matters that such a by-law was made."

The PRESIDENT—"Any new business would be ruled out at this time, but I do not consider the suggestion of Dr. Reynolds new business."

Dr. DENSLOW LEWIS, Chicago—"I move that we accept the report of the executive committee as read." Carried.

The PRESIDENT—"I hold in my hand the Senn medal, and if there is any member in the hall who knows whether any one has won it or not, I would like to know."

A member stated that the prize essay committee had not received any essay of sufficient merit during the year to award the medal.

Dr. C. E. RUTH, Keokuk, Iowa—"I move you, Mr. President, that Dr. Atkinson be given a vote of thanks of this ASSOCIATION for his long, faithful and efficient services, and that all uncomplimentary reflections cast upon him and his work be expunged from the records of the meeting." Seconded and carried.

REPORT ON PRIZE COMPETITION.

Dr. GEORGE M. GOULD reported on behalf of the committee on the prize competition of the AMERICAN MEDICAL ASSOCIATION for meritorious scientific work, as follows:

The committee respectfully reports that it has received no essay for which it recommends the award of the prize.

[Signed] GEORGE M. GOULD,
E. FLETCHER INGALS,
T. W. HUNTINGTON.

On motion of Dr. Bishop, the report was received, the committee continued and instructed to make an effort to secure essays for another year.

On motion of Dr. Love, a vote of thanks was extended to the executive committee for its arduous labors and efficient work.

Dr. DUDLEY S. REYNOLDS—"I move that we tender a vote of thanks to Dr. Starling Loving, chairman of the committee of arrangements, and to the members of the profession of Columbus, in providing for our comfort and entertainment; that we thank the citizens of Columbus for their generous hospitality and continued devotion in the attempt to relieve our innumerable wants; that we thank the railway companies for the exceedingly satisfactory reduction of rates in attending the meeting; that we thank the great God of the Universe for having permitted us to assemble and carry on one of the most successful meetings that we have ever held in the history of the ASSOCIATION. Seconded and unanimously carried.

On motion, the thanks of the ASSOCIATION were tendered to the retiring president, Dr. Mathews, for having so efficiently and ably presided over the deliberations of the ASSOCIATION.

REPORT OF JUDICIAL COUNCIL.

The secretary read the following from the judicial council:

Your council would report in regard to the appeal of Dr. Charles G. Cannaday, of Roanoke, Va., against the decision of the judicial council of the State Medical Society of Virginia, that they have instructed their secretary to notify all parties concerned to appear before the judicial council of this ASSOCIATION at the next meeting, to be held in Atlantic City, N. J., commencing on the first Tuesday of June, 1900, when this matter here and there will be adjudicated.

In regard to the matter of appeal of W. F. Barclay, your judicial council has referred this matter back again to the Medical Society of the State of Pennsylvania for adjudication.

Your council would report the resolution which was adopted at the Denver meeting in 1898 and referred to us, to be unconstitutional, as it is in violation of article 2 of the constitution relating to membership.

[Signed] N. S. DAVIS, Pres. judicial council,
T. D. CROTHERS, secretary.

The secretary read the following resolution, offered by Dr. Charles E. Slocum, Defiance, Ohio.

Resolved, That this ASSOCIATION hereby commends the efforts of the Indiana State Medical Society in preserving pathologic specimens and exhibiting the same at this meeting. This exhibit is worthy the attention of every member, being a good example of what careful and persistent attention to pathology may accomplish in a short time when well directed. Such efforts are recommended to all societies as conducive to more careful and methodic diagnosis of treatment.

On motion, this resolution was adopted.

The secretary announced the following delegates:

To the British Medical Association for this year: Geo. L. Cole, Los Angeles, Cal.; H. G. Brainerd, Los Angeles, Cal.; D. E. Osborne, St. Helena, Cal.; Frederick Peterson, New York City.

To the International Medical Congress: E. R. Campbell, Vermont; A. P. Clarke, Cambridge, Mass.; Henry O. Marcy, Boston; J. C. Cooper, Philadelphia; Liston H. Montgomery, Chicago; F. H. Wiggin, New York City; A. F. Jonas, Omaha, Neb.; Dr. Lowry, Lincoln, Neb.; J. F. Jenkins, Tecumseh, Mich.; N. R. Coleman, Columbus, Ohio; Charles H. Hughes, St. Louis.

The secretary read the following communication from A. S. Capehart, director of liberal arts and chemic industries at the Paris Exposition:

CHICAGO, June 3, 1899.

ARTHUR R. ELLIOTT, M.D., Auditorium Hotel.

My Dear Sir:—By authority of Hon. F. W. Peck, Commissioner General for the United States to the Paris Exposition of 1900, the liberty is taken of suggesting to the AMERICAN MEDICAL ASSOCIATION, at its next annual meeting, the advisability of considering the practicability, as well as desirability, of appointing a committee empowered to collect and select whatever in the judgment of such committee may be deemed appropriate to be exhibited as representing the medical profession from the national aspect, in the scientific section of medicine and surgery, department of liberal arts, United States section, Paris Exposition of 1900—such ASSOCIATION to receive any and all accruing emoluments.

In this connection the liberty also is taken to state that a reasonable amount of exhibit space will be held in reserve until after the next annual meeting of your ASSOCIATION and time has been given for official notification to reach this department as to any action that may be taken in this matter.

No action was taken on this communication.

AMENDMENT OF CODE OF ETHICS.

The secretary read the following amendment to the Code of Ethics, which was offered by Dr. Q. C. Smith of Austin, Texas. To amend paragraph 9 of article 4, of the Code of Ethics of the AMERICAN MEDICAL ASSOCIATION, be it

Resolved, That attending physicians are entitled to charge a consultation fee for each consultation, in addition to visit fee, equal in amount to that ordinarily charged in similar cases by consulting physicians residing in the same city, locality or community where the service may be rendered. (To lie over one year.)

EXECUTIVE COMMITTEE.

The following are the officers of the executive committee for the ensuing year:

Chairman, W. J. Herdman, Ann Arbor, Mich.; vice-chairman, W. T. Mayo, Rochester, Minn.; additional members, J. H. Musser, Philadelphia, Henry E. Tuley, Louisville.

SECTION OFFICERS.

The secretary announced the following as the officers of sections:

SECTION ON STATE MEDICINE.

Chairman—W. C. Woodward, Washington, D. C.

Secretary—Amand Ravold, St. Louis.

SECTION ON STOMATOLOGY.

Chairman—M. H. Fletcher, Cincinnati.

Secretary—Eugene S. Talbot, Chicago.

Executive Committee—John S. Marshall, Chicago; A. E. Baldwin, Chicago; G. V. I. Brown, Milwaukee.

Other Section officers were printed in the JOURNAL, June 10, p. 1341.

On motion, the ASSOCIATION then adjourned to meet at Atlantic City, N. J., the first Tuesday in June, 1900.

Normal and Pathologic Toe Reflexes.—Kalischer says when dorsal flexion of the toes occurs as the sole reflex it indicates pathologic conditions, as there is always plantar flexion in normal conditions. The dorsal reflex is noted almost exclusively with affections connected with a disturbance of the pyramidal tracts and is important as an early symptom of these lesions.—*Virchow's Archiv.*, clv. 3.

Correspondence.

Pseudotuberculosis.

LONDON, ENG., May 1, 1899.

To the Editor:—This is a subject, allusions to which are frequent in medical literature. These, however, are essentially of the vaguest and most academic character and the general impression to be gained from them is that such a disease exists much more commonly than we usually suspect, and is frequently mistaken for genuine tuberculosis. These impressions were, however, completely dissipated by the interesting discussion which recently occupied two successive sessions of the London Pathological Society. In the first place it was shown that there is no such single or distinct disease, but that the name applies to a number of conditions which agree only in one respect, that they imitate more or less completely the anatomic picture of tubercle postmortem; clinically, there is little or no resemblance whatever between themselves, or to the "genuine" form. This "anatomic tubercle" may be due to a number of different causes, but chiefly to five, viz.: foreign bodies in the tissues, bacilli, yeasts, moulds and worms.

As to the first of these, little need be said, except that it is rare and the tubercles usually few in number, except in experimentally-produced cases.

The second or bacillary form is somewhat more common and possesses not only lesions much more difficult of distinction, in both number and distribution, but also an organism which even in staining reactions quite closely resembles that of the genuine disease. So that the awful possibility is raised of a bacillus pseudotuberculosis, as well as pseudo-lesions. It is, however, usually much milder in type, scarcely affects the general health or bodily condition, and usually rapidly runs its course to recovery, so that even a brief period of keeping under observation practically suffices to distinguish it. It was first discovered by Sims Woodhead in his work for the Royal Commission on the transmission of tuberculosis, and has seldom been found except in guinea pigs. The variety due to yeast infections is more widely distributed, more rapid in its spread and more acute in its type, not infrequently proving fatal. It may be due to several different species of yeast and is found in the human subject, though rarely. This variety may very closely resemble the common form anatomically, except that the tubercles are white, translucent, instead of gray, are larger, firmer and less inclined to caseate. The tubercular *mycosis*, caused by moulds or *aspergillosis* has a wide zoölogic distribution, having been observed in birds, especially waterfowl and pigeons, horses, cattle, dogs and our own species. Although in numerousness and distribution its lesions are not unlike those of ordinary tubercle, yet they are usually distinguishable even by the naked eye, forming patches, plaques and cup- or ball shaped masses rather than nodules in the tissues and often of a distinctly "woolly" white, black, brown, or green color, according to the species of *aspergillus* present. Under the microscope they present a striking picture, the "tubercle" containing in its center a mass of fetid mycelium, with conidia, sporangia and spores of various colors, which latter may often be found in abundance in scrapings from the patches. This variety is extremely common in the lungs and air sacs of birds, where, however, it is anything but tubercular in appearance, forming cone-shaped, greenish or blackish masses, hollow cups composed of cheesy matter and lined with an abundant growth of the mould and even plates an inch or more square, or forming an almost complete lining of an air sac or the pericardium. Indeed, it is only in horses and human subjects where the prevalent mould—*aspergillus fumigatus*—has a white mycelium and sporangia, that the mycosis deserves the name of even "pseudo" tuberculosis on anatomic grounds. Clinically, however, just the reverse is true, for its course in both horse and man strikingly simulates a rather chronic form of true tuberculosis, with hectic, profuse expectoration, vomicæ and pleurisies, and the diagnosis can often be made only by finding portions of the mycelium or spores in the sputum, under the microscope. It is, however, extremely rare in both species—one of the curiosities of medicine. A still rarer form in this group is that produced by organisms resembling the cladathrix and streptothrix in the ox (Nocard) and in man (Flexner).

Last of all, and curiously enough though of most widely different origin, most closely simulating the true form in naked eye appearance, is the great group of pseudotuberculosis due to animal parasites. These are mostly worms of the *strongyle* or *Filaria* group, with a few flukes (Distoma), although their exact generic positions are not fully ascertained nor determined. The picture they present is most striking. An abundant crop of small, clear-cut tubercles, in the lungs, on the serous membrane, in the coats of the intestines, varying all the way from greyish to whitish translucency to bright yellow or creamy cheesiness—miliary or caseating tuberculosis to the letter. A closer look, however, shows that the tubercles have the appearance of being foreign bodies in, rather than products of, the tissues, that the lymph-nodes are but little or not at all affected, and that the general condition of the animal in no way corresponds to the abundance of the lesions. Place a node under the microscope and you at once see that its center is occupied by a tiny worm, coiled up either spiral fashion or folded in a "box pleat." Indeed, in many cases the parasite can be clearly seen in some of the superficial lesions with a hand lens, and even with the naked eye on close and intelligent scrutiny. Their true nature may also be suspected from the fact they occur chiefly in those species which are rarely liable to tuberculosis—the dog, the sheep, the calf and the cat, although the writer has found them in the lungs of monkeys. In the dog the same *strongyle* attacks the walls of the blood-vessels, producing both ulcerations and multiple aneurysms, and an allied form in the horse is the cause of "worm aneurysm," producing fatal perforations in both species.

To sum up, a survey of the entire class of pseudotuberculosis, shows clearly that they are an extremely heterogeneous and ill-assorted group. Almost their only connection with each other and with the disease whose "pseudo" name they bear is that each of them in some one or two points resembles—often most crudely—true tuberculosis. Often this resemblance consists solely in the fact that tubercles, in the primitive sense of "little tubers" are produced, and the mind of the observer would need to be in a state of primeval innocence in order to even temporarily confuse them with the handiwork of the bacillus tuberculosis.

Bearing in mind the three criteria, gross anatomy, microscopic appearance and clinic history or systemic effect, there is not one of them, with the exception of some of the bacillary variety, which would pass more than two of these tests, and very few more than one. Microscopic examination of a reasonable number of specimens will promptly distinguish all forms except the bacillary. Naked eye appearances would easily disqualify all, except the yeast, the bacillary and a few forms of the mould varieties, and even the yeast and aspergillus nodes can be discriminated by a reasonably expert eye. Only two forms, the white aspergillus and the yeast, resemble the "true" disease in their clinic history or systemic effects. We have seen the intestines of fat wethers in primest condition, which in fact had been slaughtered for export mutton, thickly studded with worm tubercles, and the lungs and peritoneum of monkeys, which had died of other causes, similarly affected.

In short, a thorough examination, from all points of view, reduces the danger of any of these "pseudo" lesions being mistaken for the "genuine" to almost a *quantité negligeable*. Then why continue the use of the term "pesudotuberculosis"?

There is really no scientific ground for it; its only justification lies in its convenience. The system of naming things or conditions by what they are *not*, can hardly be regarded as either rational or desirable, its only advantage being that it leaves opportunity for the advance of our knowledge. We have only one chance in a thousand of being egregiously wrong, and there are not a few of our "positive" names which had better never been applied, such as "uremia," "pyemia," "melancholia," "epilepsy," "lunacy," and yet, under the circumstances, the term, indefensible as it is on scientific grounds, will probably continue to be used on account of its practical convenience. For, although the principle of nomenclature which it illustrates is an unsound one, yet it so happens that the chief practical interest and importance of all these conditions centers in what they are *not*. From the point of view of the physician, the veterinarian, the meat inspector, if they are recognized as *not* tuberculosis they may be disregarded. It matters little what they are, so far as prognosis is concerned, for with the exception of the white aspergillosis and the yeast tuberculosis, they give rise to no true infection or serious symptoms of any kind.

To the pure pathologist the distinctions are of importance, and he will find such a "shotgun" sort of term a hindrance and discard it. But to the clinician it is of value to know and keep in mind that there is a variety of conditions which simulate tuberculosis and yet have none of its fatal significance. And this clumsy term is practically the only one which will cover this group. So widely do its members differ that the only thing which covers them all is their liability, at certain stages, to be mistaken for tuberculosis. Another practical difficulty in the way of getting rid of the term is the absence of a substitute. The group would have to be broken up into at least ten or fifteen different classes, each bearing a new, strange —and terrible—name, such as "aspergillosis," "streptothricitis," "saccharomycosis," etc., which would convey no meaning whatever to the minds of other than expert biologists. Instead of one foolish, but easily understood name, we should have a dozen scientific, but well nigh incomprehensible ones. In science as well as in society it is sometimes better to "endure the evils that we wot, than fly to remedies we know not of." To continue the use of an inapt and even unfortunate name whose application is clearly understood is often better than to change to a dozen new terms more significant, it is true, but whose meaning future developments may also prove to be mistaken. Let it be clearly understood that pseudotuberculosis simply means any process which more or less closely imitates the anatomic handiwork of the bacillus tuberculosis, and its retention will be not only justifiable, as its present application is precisely to this wide group, but of much practical convenience. It is no disadvantage for us to be reminded, in these days of a rather too botanic pathology, that there are a number of organisms and agencies capable of producing that swarm of angry leucocytes and new cells about an intruder which was known as the old "anatomic tubercle."

And as all observers unanimously agree that 90 per cent. of all apparent "tuberculoses" are due to the action of the genuine bacillus, we think there is little danger of disturbing in any way the supremacy of the latter or leading to any confusion of our present clear conceptions of the disease by retaining the harmless "pseudo" term as a convenient designation for this insignificant minority.

We would not for a moment depreciate the high value of clear and accurate knowledge of the actual processes covered by the term and a nomenclature to match. This is most important from any point of view, and indeed, if it were more generally possessed by even pure bacteriologists, we should have been spared some painful errors. For instance, had Plimmer, in his recent work on the cancer parasite, reported to the Royal Society, been familiar with them, he would not have been so unfortunate as to fondly mistake what by his own descriptions and plates was obviously an ordinary "yeast tuberculosis," resulting from the inoculation of his organism into guinea-pigs, for a carcinomatous process.

But so long as we have pathologists who are, as the director of one of our largest bacteriologic institutes described them a short time ago, "nothing but cryptogramic botanists," these little mistakes will continue to occur. It ought hardly to be necessary to plead for a knowledge of these disturbances from the point of view of the host as well as of the parasite, but surely even a moderate acquaintance with what we fear we must now term "pseudopathology," the true pathology being the life history of the micro organism, would have been sufficient to prevent a process which proved fatal *in fifteen days*, affected *only connective tissues*, and developed abundant translucent tubercles all over the peritoneum, from being regarded as carcinomatous even by the most hopeful imagination, if it did not succeed in classing it as pseudotuberculosis.

H.

Hot Springs, S. D., as a Health Resort.

CHICAGO, ILL., June 1, 1899.

To the Editor:—Hot Springs is situated in the Black Hills, about 3400 feet above the sea-level, in a valley surrounded by mountains not over 5000 feet in altitude, and it differs from the surrounding country meteorologically and geologically. Deadwood, which is about ninety miles distant, is much colder, and about 5000 feet above sea-level, which may account for the difference. Spearfish, fourteen miles from Deadwood is about 3500 feet about sea-level and is much colder than Hot Springs during the winter. This applies with equal truth to all localities thirty or more miles distant from Hot Springs. It derives its name from the large number of mineral springs which supply all the bath-houses with water not exceeding 90 degrees F. One very pleasant feature is an enormous plunge-bath, supplied by innumerable springs percolating through a gravel bottom, thereby ensuring constant cleanliness and drainage. The temperature of the water is never less than 80 F. throughout the year. It is patronized very largely by pleasure-seekers, and victims to subacute articular rheumatism. All of the waters are alkaline and contain considerable calcium sulphate, a fair quantity of magnesium sulphate, some chlorid of sodium and potassium, iron and silica. They vary somewhat in composition and are either laxative or diuretic in their effects. Take in connection with the abundant pure water-supply an ideal climate of constant sunshine, dry, pure atmosphere, cool, agreeable nights and you have a happy combination.

The following is the U. S. weather report: elevation, 3400 feet; per cent. of cloudiness, 22; relative humidity, 60; mean seasonable temperature, 27 degrees; annual precipitation, 17 inches. This report is based on observations during December, January and February. The following is that during June, July and August: per cent. of cloudiness, 21; relative humidity, 60; mean seasonable temperature, 62 degrees; annual precipitation, 17 inches.

I have observed the progress of four cases of pulmonary disease in Hot Springs, divided as follows: One case of pulmonary abscess remained one year and returned, having gained over twenty pounds in weight, and expectoration having ceased; physical examination indicated that the lesion had subsided. The second, a case of incipient tuberculosis and tubercular lymphatics, recovered. The third, pulmonary tuberculosis of rapid type, pronounced physical decline, remained one year and gained nearly thirty pounds; believing himself cured, he returned, was well three months, and fell a victim to miliary tuberculosis after undue exposure to cold. The fourth case, tubercular pleuritis with effusion, right apex involved, was sick three months, with rapid decline. He remained in Hot Springs about four months; on return had gained eighteen pounds, effu-

sion had disappeared, no subjective symptoms noticeable; agreed to return if necessary.

There are cases which derive no benefit, a fact that applies to all health resorts. The usual difficulty of persuading a patient to remain in a favorable climate was encountered in all these cases. I merely cite these rather abbreviated reports as proof of the statement that this climate is a most excellent one for many pulmonary lesions.

Among the diseases amenable to treatment are chronic articular rheumatism, neurasthenia, some cases of asthma, hay-fever, chronic gastric lesions, chronic nephritis, and certain chronic skin diseases; the latter are treated by immersing the patient one hour or more in the water at the natural temperature. I have seen unexpected good results from this treatment. Invalids as well as pleasure-seekers can find ample opportunities for swimming, horseback rides, coach rides, etc. Among the sights are the Bad Lands, Wind Cave, Sylvan Lake, Harney's Peak, Battle Mountain, Echo Canyon and Cascade Springs.

J. H. HOELSCHER, M.D.

34 Washington St.

A Novel Device.

CINCINNATI, June 16, 1899.

To the Editor:—The following is a novel device for securing a small quantity of the contents of stomach for examination: Take the long end of a largest-size empty capsule, into this crowd or condense as much as possible of fine sponge, to which is attached a fine silk thread of sufficient length. The capsule is then closed and the patient allowed to swallow the same. After sufficient time has elapsed for the capsule to dissolve, the sponge is removed by the string. The sponge will be found to have absorbed a sufficient amount of gastric contents for all practical purposes. In this way tests can be made for free hydrochloric acid or, indeed, for anything else that may have been taken into the stomach. This method is original with me; I do not know whether others have used the same device or not. It will, I am quite sure, be found a very convenient and practical method. Several capsules prepared in the same manner and swallowed would furnish a sufficient quantity of gastric juice for any and every purpose.

WM. H. DE WITT, M.D.

Current Medical Literature.

Titles marked with an asterisk (*) are noted below.

Annals of Surgery (Phila.), June.

1.—*Observations in Sterlization of Catheters and Bougies, and on Presence of Bacteria in Urethra. James H. Nicoll.
2.—*Uretero-Ureteral Anastomosis for Traumatism. Francis H. Markoe and Francis C. Wood.
3.—*Movable Kidney. John B. Deaver.
4.— Preliminary Report on Surgical Anatomy of Gall-Bladder and Ducts, from Analysis of 100 Dissections. Geo. E. Brewer.
5.— Inspection of Abdominal Cavity and its Viscera in Post-mortems. Byron Robinson.
6.—*Notes on Cancer of Fundus Uteri. Charles B. Penrose.
7.—*Operative Relief of Vesicorectal Fistula. Geo. S. Brown.

Albany (N. Y.) Medical Annals, June.

8.—*Address. William Osler.
9.— Some Scientific Aspects of Mind Cure. Selwyn A. Russell.
10.—*Family Susceptibility to Facial Paralysis. Wm. Browning.
11.— Fracture of Cervical Vertebræ. Chauncey P. Biggs.

University Medical Magazine (Phila.), June.

12.—*Some Unusual Forms of Trichophytosis. M. B. Hartzell.
13.—*Operation for Perforation in Case of Typhoid Fever. Edward Martin.
14.—*Pyonephrosis Complicating Gonorrhea. Charles Greene Cumston.
15.—*Report of Thirteen Cases Showing Partial Reversal in Visual Fields. M. W. Zimmerman.
16.— Recent Instruments of Precision for Muscular and Tactile Sensations. Arthur MacDonald.

Archives of Pediatrics (N. Y.), June.

17.—*Results in Administering Antitoxin of Diphtheria as an Immunizing Agent. Samuel S. Adams.
18.—*Brief Reports of Interesting Cases. J. P. Crozer Griffith.
19.—*Remarks on Diagnosis of Cerebellar Abscess in Children. L. J. Hammond.
20.— Case of Abscess of Lung, Following Pneumonia. Resection of Ribs—Recovery. B. Van D. Hedges.
21.— Administration of Antitoxin by Mouth. Ward B. Whitcomb.

Medical Mirror (St. Louis), June.

22.—*European Medicine about 1799. A. Jacobi.
23.—*Physician as a Teacher. J. Rudis-Jicinsky.
24.— Some Thoughts on Diphtheria. I. N. Love.
25.—*Inguinal Colostomy for Imperforate Rectum. W. W. Keen.
26.—*How Do Physicians Cure Diseases? H. C. Wood.

Annals of Ophthalmology (St. Louis), April.

27.—Historic Notes of Strabismus and Other Anomalies of Eye Muscles. Geo. T. Stevens.
28.—*Surgical Treatment of High Myopia. By H. V. Würdemann and W. R. Murray.
29.—*Some of the Failures Immediate and Remote met with after Cataract Extraction. J. Morrison Ray.
30.—*Etiology and Importance of Iritis. H. H. Brown.

St. Paul Medical Journal, June.

31.—*Etiology of Abscess of Liver. Henry Jackson.
32.—*Osteopathic Delusion. Arthur Sweeney.
33.—*Dietl's Crises and Gall-Stone Colic. Charles L. Greene and John T. Rogers.
34.— Comparative Merits of Myomectomy in Treatment of Myoma of Uterus. J. L. Rothrock.
35.— Apparent Closure of Eustachian Tubes. B. M. Behrens.

New England Medical Monthly (Danbury, Conn.), June.

36.— Fevers of Alabama. Charles M. Watson.
37.— Proper Dosage of Thialion. E. M. Smith.
38.— Absorption vs. Digestion of Milk. L. Duncan Bulkley.
39.— Anemia. F. E. Hale.
40.— How I Quickly Cured a Cold in Head. Wm. H. Murray.
41.— On Physical Education. C. P. Robbins.

Journal of Cutaneous and Genito-Urinary Diseases (N. Y.), June.

42.—*Contribution to Study of So-called Premycosic Stage of Mycosis Fungoides. James Nevins Hyde and Frank Hugh Montgomery.
43.—*Liomyoma Cutis. Charles J. White.

Laryngoscope (St. Louis), June.

44.—*Treatment of Nasal Stenosis Due to Deflective Septa, with or without Thickening of Convex Side. F. H. Bosworth.
45.—*Ibid. Morris J. Asch.
46.—*Ibid. John O. Roe.
47.—*Ibid. Arthur W. Watson.
48.—*Ibid. E. B. Gleason.
49.—*Ibid. Beaman Douglass.

Southern California Practitioner (Los Angeles), May.

50.— Feticide from a Medicolegal and Moral Standpoint. Louise H. Clarke.
51.— Fracture: Elbow-Joint. Harry M. Sherman.
52.—*Treatment of Cases of Abortion and Miscarriage. A. S. Parker.

International Dental Journal (Phila.), June.

53.—*False Tonsils. Robert H. M. Dawbarn.

Sanitarian (Brooklyn, N. Y.), June.

54.— Some Common Sources of Impurity in Country Houses. Harvey B. Bashore.

Medical Summary (Phila.), June.

55.—*Nervous System—Its Influence over Mental Declaration. Richards Gray.
56.— Treatment of Erysipelas. A. G. Ellis.
57.— Pneumonia and Pneumonia. Geo. J. Monroe.
58.—*Drug Habits and their Treatment. C. E. Patterson.
59.—*Study of Hypnotized State. Arthur MacDonald.
60.—*Apomorphin the Antidote for Strychnin Poisoning. H. B. Stanley.
61.— Some Practical Points Gleaned from Practice. B. H. Brodnax.
62.— Every Man his Own Doctor. Silas Hubbard.
63.— Catarrhus Ambrosia. Pennebaker and Tripp.

Medical and Surgical Monitor (Indianapolis), May 15.

64.—*Notes on X-Rays. Wm. V. Morgan.
65.— Temperament and Heredity as Related to Disease. L. L. Todd.
66.—*New Operation for Hernia. Emory Lanphear.
67.— Therapeutic Value of the Oleates. Samuel E. Earp.

Texas Medical News (Austin), May.

68.—*Invisible Enemy and Our Methods of Defense. M. M. Smith.
69.—*Medical Gynecology. J. W. Cook.

Southern Practitioner (Nashville, Tenn.), June.

70.—*Subcutaneous Rupture of Large Arteries from Contused Wounds. J. A. Crook.
71.—*Case of Ventral Hernia in which the Pregnant Uterus formed the Contents of the Hernial Sac. A. L. Macon.
72.— Some Observations, Mainly Clinic, on Uric Acid Diathesis. Isaac J. Jones.

Kansas City Medical Index-Lancet, June.

73.— Dilatation of Stomach. C. W. Dulin.
74.—*New Operation for Hernia. Emory Lanphear.
75.— Case of Friedrich's Ataxia, with Abbreviated Clinic Digest. S. Grover Burnett.
76.— Common Cardiac Derangement, Diagnosis, Prognosis, etc. T. F. Lockwood.
77.— Review of Recent Advances in our Knowledge of Anatomy and Physiology of Nervous System. John Punton.

Chicago Clinic, May.

78.— Headache Viewed from Oculist's Standpoint. John R. Hamill.
79.— Influence of Biologic Research on Surgery and Medicine. W. J. Fernald.
80.— Traumatic Dislocations of Femur. J. N. Bartholomew.
81.— My Experience with Galvanocaustic Treatment of Prostatic Hypertrophy. F. Kreissl.
82.—*Treatment of Rectal Fistula. J. R. Pennington.
83.—*Pericystitis in Puerperio. Gustav Koltscher.
84.—*Heredity of Tabes and Paretic Dementia. Harold N. Moyer.
85.—*Observations on Operation of Symphysiotomy. H. McKennan.
86.— Nosophen as a Substitute for Iodoform. D. A. K. Steele.
87.—*Right Marital Living. Ida C. Craddock.

Columbus Medical Journal, May 16.

88.— Historic Sketch of American Medical Association. James U. Barnhill.

Pediatrics (N. Y.), June 1.

89.— Case of Genua Valga, with Remarks on Osteotomy. Charles Greene Cumston.

90.— Convulsions in Children. Walter F. Boggess.
91.— Diphtheritic Paralysis. Francis Huber.
92.— Types of Children in Germany. Arthur MacDonald.

Philadelphia Medical Journal, June 10.

93.—*A Century of Medicine in America. J. C. Wilson.
94.—*Two Unusual Cases of Surgery of the Trachea. W. S. Jones and W. W. Keen.
95.—*Sanitary Lessons of the War. George M. Sternberg.
96.— Propagation of Diseases by Means of Insects, with Special Consideration of Common Domestic Types. W. M. Coplin.
97.—*On Some Conditions of Healing by First Intention, with Special Reference to Disinfection of Hands. Theodore Kocher.
98.—*Our National Body: Its Purposes and Destiny. Joseph M. Mathews.
99.— Case of Dermoid Cyst. J. S. Jamieson.

Medical Record (N. Y.), June 10.

100.—*Remarks on Incision at Outer Border of Rectus for Appendicitis. Frederick Kammerer.
101.—*Local Anesthesia. Alexander B. Johnson.
102.—*Diphtheritic Conjunctivitis Cured with Antitoxin. G. H. Bell.
103.—*Abortive Treatment of Gonorrheal Ophthalmia by a Cantholysis and the Thorough Application of Nitrate of Silver, Forty Grains to the Ounce. H. D. Jamison.

New York Medical Journal, June 10.

104.—*President's Annual Address to the American Medical Association. Joseph M. Mathews.
105.—*Sanitary Lessons of the War. George M. Sternberg.
106.—*Voice in Diagnosis. Alexander J. C. Skene.
107.—*Vaginal Douches, Ante-partum and Post-partum. L. Napoleon Boston.
108.—*Pneumonectomy, the Future Treatment of Incipient Pulmonary Tuberculosis. John S. Pyle.
109.—*Medical Gynecology, or Relation of Vital Debility and Passive Congestion to Diseases of Women. Eugene Coleman Savidge.

Boston Medical and Surgical Journal, June 8.

110.—*Address of President. Jos. M. Mathews.
111.—*Some Conditions of Healing by First Intention, with Special Reference to Disinfection of Hands. Theodore Kocher.
112.—*Sanitary Lessons of the War. Geo. M. Sternberg.
113.—*Climate and Sea Voyages in Treatment of Tuberculosis. Hermann Weber.

Cincinnati Lancet-Clinic, June 10.

114.—*Vertigo. Philip Zenner.

Maryland Medical Journal, June 10.

115.—*John Hughes Bennett—His Services to Medicine. Wm. W. Johnston.
116.—Practical Hints About Herpes Zoster and its Treatment. J. Abbott Cantrell.
117.—*Epithelioma (Skin Cancer)—Treatment. A. D. McConachie.

Medical Review (St. Louis), June 10.

118.—*Burning Questions Relating to Paretic Dementia. L. Bremer.
119.— Technic and Management of the Cataract Operation. Bard H. Hulen.

Medical News, (N. Y.), June 10.

120.—*President's Address. Jos. M. Mathews.
121.—*Century of Medicine in America. J. C. Wilson.
122.—*Medical Aspects of Crime. D. K. Brower.
123.—*Sanitary Lessons of the War. Geo. M. Sternberg.
124.—*Respiratory Failure Occurring before Circulatory Failure in Brain Injury and Disease, and its Clinic Bearings. W. H. Hudson.
125.—*Resistance of Bacteria to Cold. M. P. Ravenel.

AMERICAN.

1.—Sterilization of Catheters and Bougies.—Nicoll reports experiments as to the sterilization of bougies and catheters of different materials, and concludes there is no method entirely reliable that is not injurious or destructive to the instrument. In practice he avoids the use of the catheter as far as possible, and when it must be employed he uses the red rubber Jacques catheter in preference to the gum elastic or metal one. It is quite as readily sterilized by boiling or immersing in an antiseptic solution as is a metal one. Where a catheter is absolutely necessary and a red rubber one fails to pass, he uses a gum elastic rather than a metal one, especially in the hands of the patient himself. He illustrates an arrangement of glass receptacles for catheters in which they can be kept in an antiseptic fluid. The latter part of the paper deals with the subject of urethral bacteria. Investigation on this subject is still being carried on and no very positive statements beyond those of the difficulties of the investigation are here given.

2.—Uretero-Ureteral Anastomosis.—Markoe and Wood recall the various methods of operation for anastomoses of the ureters, and illustrate the different methods very intelligibly by cuts. They conclude that in all cases of severed ureter the preferable operation seems to be uretero-ureterostomy, according to the method devised by Van Hook, if too great a length has not been removed. If a loss of several inches has occurred, an end-to-end or oblique suture will be the preferable procedure. The mortality from Van Hook's operation has been very slight and this due to hemorrhage, shock, or infection rather than to the operation itself. Ureterocystostomy is chiefly applicable in those cases in which the ureter has been severed at a point below the ileopectineal line, the vesical end being so short and deeply situated that it is nearly impossible to suture it. Ureteroenterostomy is to be employed only in cases of exstrophy or where it is necessary to remove the bladder altogether.

3.—Movable Kidney.—Deaver's paper is principally in regard to the diagnosis of movable kidney, with some remarks as to its treatment. The operation he performs is one suggested by Senn, and consists of scarifying the capsule of the kidney, not involving the kidney substance itself, replacing it *in situ* and packing with gauze. The patient is made to assume a supine position and the gauze is removed in a week or ten days, when the bed of the kidney and its surface will be found to be healthily granulated. The wound is washed out with sterile water or a weak solution of bichlorid, to which is added carbolic acid. The wound is then gently repacked and dressed in the usual manner. The wound heals completely in four to five weeks, and the results in his cases have been entirely satisfactory. He briefly reports nine cases.

6.—Cancer of Fundus Uteri.—During the four years 1894-97, Penrose has observed 11 cases of cancer of the fundus uteri and remarks on its apparently greater frequency than given in the text-books. During the same period his records show 67 cases of cervical cancer, and according to his observations this latter type is decreasing in frequency, which he attributes to the wider use of the operation of trachelorraphy. He briefly notes the results of his cases of fundus cancer and remarks that they show that the result of operation is much better than for cancer of the cervix.

7.—Vesicorectal Fistula.—Brown reports a case of vesicorectal fistula in which after thorough operation the fistula was closed after having diverted the intestinal contents through an artificial anus which was itself finally closed by operation. He remarks on the very slight mention this condition receives in the text-books, considering the fact that it must have been a very common occurrence when the perineal operation for stone was fashionable. His patient had been operated on so frequently that he had established a very comfortable tolerance for etherization. The cure of the fistula left the bladder in a semiparalyzed condition, with incontinence of the urine owing to defective action of the sphincter.

9.—Scientific Aspects of Mind Cure.—Russell calls attention to the influence of the mind cure on the body and affecting the processes of disease, and the usefulness of mind cure divested of superstition and fraud.

10.—Facial Paralysis.—Browning remarks that he not infrequently meets with cases where more than one person in the same family has been the sufferer from facial paralysis, and reports a case in which it occurred four times in two generations. No other form of nervous disorder was present. He refers to the various authors, Neumann, Bernhardt, Hubschmann, Barkas, J. Neumann and Fabre, who have noticed this special family tendency.

12.—Trichophytosis.—Hartzell reports some unusual forms of trichophytosis, concentric ringworm, tinea circinata in the axillæ, suppurative ringworm on the upper lip, trichophytic folliculitis of the back of the neck, leg, arm and wrist, etc.. He also mentions certain anomalous types of trichophytous disease noticed by other observers, such as ringworm of the palm of the hand and soles of the feet, suppurating follicles in the fingers, etc.

13.—Typhoid Perforation.—Assuming that in the near future operation for this condition will be the rule, Martin reports one unsuccessful case operated on lately, thirty-two hours after perforation, and gives brief mention of two or three others in which the diagnosis was dubious. He thinks mistakes in this regard are liable to give the legitimate operation a serious setback. There are cases in which a differential diagnosis is extremely difficult. When, however, a patient in the second or third week of typhoid fever complains of sharp, sudden, persisting, agonizing pains; of a great increase of tenderness; when this is accompanied by symptoms of marked constitutional depression, and it is followed by rapid and life-threatening tympany, if there is the slightest prospect of surviving operation, the abdomen should be opened at once.

14.—Pyonephrosis Complicating Gonorrhea.—Cumston reports a case of suppuration of the kidney due to gonorrhea, treated by nephrotomy, and discusses the condition at length.

15.—Partial Reversal in Visual Fields.—The following are the general conclusions deduced by Zimmerman from a study of the general subject of contractions and reversal of the visual field, and from thirteen personal observations here reported and illustrated: "Moderate contraction of the visual field alone is not conclusive. Extreme contraction, in which the field for white or form suffers relatively more than the color fields, suggests very strongly the presence of hysteria. Complete reversal, and persistent partial reversal, when of considerable extent and not explained by organic lesions, are almost certain evidences of the hysteric state.

17.—Diphtheria Antitoxin.—The presence of diphtheria in the Children's Hospital at Washington induced Adams to make extensive experiments with antitoxin as an immunizing agent. It was given to 422 children suffering from various disorders; 100 units were given to infants, 250 to those between 2 and 6 years of age, and 300 to 500 units to those above that age: 17 of the 422, or 4.28 per cent., contracted diphtheria and received antitoxin in curative doses; 2 died. The average duration of immunity in these 17 cases was 51.01 days. The author concludes that it is impossible to draw any definite conclusion as to the value of the immunizing dose of antitoxin. He is confident, however, that the doses given were too small, and that better results would have been obtained with larger ones. The average duration of immunity as shown agrees with that obtained by other observers. We are probably warranted in asserting that the larger the immunizing dose the longer the duration of the immunity. The immunizing dose of antitoxin has no injurious effect on the kidney. The only pathologic effect of the antitoxin thus given was urticaria in two of the cases.

18.—See abstract in JOURNAL, March 25, p. 664.

19.—Cerebellar Abscess in Children.—Hammond gives his personal experience with five cases of cerebellar abscess, during the last four years, in children between 2½ and 5 years of age, with no pyemia in any other part of the brain. He reports his cases and summarizes his opinions as follows: Given a case of pyemia of the sinuses accessory to the brain, or the history of trauma, with rapid loss of flesh and strength, rapid pulse and high temperature for the first seventy-two hours, followed by decline of temperature, quick pulse, pronounced flexure of the extremities, dilation of the pupils (never, however, becoming fixed), semiconscious condition with uncontrollable restlessness, a peculiar indisposition on the part of the patient to obey requests made, sugar in the urine, slow respiration (three to twelve per minute), tendency (if standing) to go to one side, swinging of the hands always to one side, entire absence of paralysis. This group of symptoms does not, so far as he knows, occur in any other diseases of childhood, and is, in his opinion, indication of abscess in the cerebellum. The presence of the sugar in the urine is an important symptom and he believes it lends more weight to the possibility of determining the size of the abscess from pressure affecting the fourth ventricle.

22.—See abstract in JOURNAL, May 6, p. 1000.

23.—Physician a Teacher.—Rudis-Jicinsky proposes the employment of physicians as teachers and lecturers in the public schools on subjects of hygiene and practical domestic medicine. He believes that there is in this way a chance for the employment of medical graduates who, in the overcrowded state of our profession, might not be successful otherwise, and that thousands of human lives might be saved by instruction on preventable diseases and their avoidance.

25.—Inguinal Colostomy.—Keen advises inguinal colostomy as a substitute for the perineal operation, as better for cleanliness and cosmetic reasons generally, and also far safer as to life. When there is no sphincter muscle the inguinal opening is far better than the perineal one, and can be managed in such a way as to cause very little inconvenience or annoyance.

26.—How Do Physicians Cure Diseases?—Wood shows that the function of the physician is to help nature and to prevent the occurrence of damaging influences. True treatment is really preventive, not absolutely curative.

28.—Surgery of High Myopia.—The author remarks on the comparative rarity of high myopia in the country, and reports two cases in which the operation of lens extraction was performed for this condition. He reviews the literature and opinions in regard to this matter and favors the operation in suitable cases. It increases the visual acuity two- to three-fold in selected cases; the retinal image and the visual field are enlarged; there is increased range of vision, with correction, for near work, though accurate vision can only be had at one fixed point. The reduction of myopia by operation permits the use of weaker lenses and diminishes the exaggerated effects of irregular astigmatism. The pupil being brought nearer to the retina, the diaphragm is nearer the nodal point and the eccentric visual rays are better excluded. He concludes that the surgical treatment of myopia should be limited to those cases over —12 D., who suffer great inconvenience from their corrective lenses. The ideal cases are those of —17 and —18 D. The operation is mainly indicated in young adults. Cases having active disease and changes in ocular structures, such as progressive myopia, choroiditis, fluidity of the vitreous or detachment of the retina are not applicable. The dangers of operative interference are more than counterbalanced by the results, which are mainly increase of visual acuity and of the visual field, and the more extended use of the eyes, which accompany diminishing of the refraction. The paper concludes with a bibliography of some fifty titles on the subject.

29.—Failures after Cataract Extraction.—Ray's paper is devoted to the description and discussion of some difficulties which accompany cases of cataract extraction. The failures, while few in number, have impressed him, and he wished to call attention to the possibilities. There were three from primary corneal suppuration, or wound infection; one from hemorrhage from the iris; two from suppurative iridochoroiditis, starting in the scar of prolapse after an apparent success; and two directly from the results of secondary operation. His experience as regards the influence of iris prolapse is much more unfavorable than that of Schweigger, as to the future well-being of the eye.

30.—Iritis.—The etiology of iritis, as stated in Brown's paper, is about as follows: the majority of all cases, 55 to 65 per cent., are due to syphilis, and a smaller proportion, varying from 10 to 20 per cent., may be credited to arthritic toxins. The small percentage left is caused by various constitutional and infective disorders, as typhoid, influenza, nasal infection, etc., with also a strong possibility of the occasional existence of a true sympathetic or neurotic iritis independent of any infection. Gonorrheal iritis, he believes, is usually diagnosed *post hoc*, though it really does occasionally exist. Traumatic iritis is not here considered. He considers the infection due rather to the toxins of the microbes than to the microbes themselves, as only in a few instances have the characteristic bacteria been discovered. He calls attention to the importance of iritis and its comparative neglect in the literature.

31.—Abscess of the Liver.—Jackson's article analyzes 17 cases of liver abscesses, as regards their causes; in 10 of these appendicitis was the only known probable cause; 2 were cases from amebic dysentery, and 3 were of indefinite origin, 2 of which were probably accidental. The autopsies of the fatal cases are reported briefly, as is also the clinic history. In all the cases under his care, a slowness of pulse was a characteristic feature. He thinks this is a matter of some importance, as it might be the cause of wrong prognosis, giving rise to a more favorable opinion than the real facts would warrant. In all cases the liver was enlarged, the spleen also in 8 cases, and in 3 it was found to be small, these including the 2 amebic cases. Vomiting was a rather constant symptom, being noted as absent in only 2 of the 17. The absence of pain and tenderness was likewise striking; in 10 of the cases there was no pain at all, and in none was it severe. In 5 cases there was leucocytosis; jaundice was prevalent in all but one, and was slight, and appearing late in the disease. He does not think aspiration of the liver a very satisfactory method of diagnosis, as the cavity may not be reached; in one of his cases three ineffectual attempts were made. Early and free incision is the only rational treatment; 2 of his cases recovered when thus treated. The most important signs of liver abscesses in the order of their frequency are: the tumor, fever, chills, leucocytosis and slow pulse. The less important are pain, tenderness, vomiting, jaundice and enlarged spleen. Symptoms or signs suggestive of appendicitis should arouse suspicion of abscess of the liver when that organ is enlarged and there is a condition of general septicemia.

32.—Osteopathic Delusion.—Dr. Sweeney gives the thorough history of the origin and rise of osteopathy, and a number of interesting extracts from the text-book, "Osteopathy Complete," which is sold only to the recognized osteopaths, at $10 a copy.

33.—Dietl's Crises and Gall-Stone Colic.—This paper reports two cases which illustrate the difficulty of distinguishing between the peculiar attacks described by Dietl in 1864, in connection with floating kidney, and gall-stone colic. In the first case the diagnosis of floating kidney was made, and operation undertaken, but the attack was found to be due chiefly to gall-stones. In the second case there was double congenital floating kidney, but no gall stones, which had been diagnosed, were found. In each case the erroneous diagnosis was reasonable, and the authors conclude that in some cases it is impossible to differentiate between these two conditions.

42.—Premycosic Stage of Mycosis Fungoides.—In this article Hyde and Montgomery give the results of careful study of 2 patients treated by them together, one of whom is still under observation. Their experience includes the observation of 13 cases, 9 in this country and 4 in France and Austria. They have also reviewed the literature of the so called premycosic stage and have been able to collate the facts in 48 cases, mostly without question as to diagnosis. They analyze the symptoms in these cases and state the general results as follows: "There

is reasonable possibility that the average patient who is about to perish from mycosis fungoides will be a man not much younger than 45 years, and occasionally very much older; that he will suffer from six months to several years with intolerable and incoercible pruritus; that in the enormous majority of cases he will display during this pruritic period over the trunk and extremities a dermatosis resembling, but not exactly like, an eczematous affection, characterized by the evolution of polycyclic discs, in hue light to dark reddish, often slightly scaling, which may be evanescent, recurrent, and which may be the seat later of infiltrations, of lichenoid papules, and still later of fungoid tumors, though the latter may develop in regions where no discs have previously appeared. The facts go to show that in a large proportion of cases this patient will be a fleshy, stout individual, with a big belly and well developed frame; that he will not find his health impaired to any serious extent before the stage of tumor formation has been reached, and even after reaching such a stage this impairment often will not be conspicuous until degeneration of the tumors has begun." The histologic study of the cases is not yet complete, but the authors, after stating the different views held as to the nature of the disorder, and admitting that while definite conclusions are not yet justified, hold that early skin symptoms in this disorder, while varying in some respects, have enough characteristics in common to indicate that they are a part of a definite morbid process quite distinct from sarcoma and differing from the recognized infectious granulomata in that the manifestations are confined to the skin, only one case having been reported involving the internal organs. In this respect it is in strong contrast with tuberculosis, syphilis, leprosy, sarcoma and carcinoma. They believe that the so-called premycosic stage is improperly designated, and would prefer the term "prefungoid," used by Morrow. They believe the mischief to be at work in the earliest pleuritic symptoms, and the skin eruptions of the early stages are as significant of the general disease as the tumors themselves.

43.—Lliomyoma Cutis.—White describes in this paper a case of this interesting disorder, of which less than a score have been previously reported. He illustrates it with half-tones, showing its muscular and other structures.

44-49.—Treatment of Nasal Stenosis.—Bosworth's method recommended in this paper is practically sawing a new septum out of the old crumpled one, as a straight board is sawed out of a crooked log. He claims that the contention of his original paper in favor of this operation has been fully confirmed by the admirable results of this operation. The idea of Asch's operation is to destroy the resiliency of the cartilage in such a way that, when forced back to its proper position and kept there sufficiently long, the result would be a straightened septum without loss of tissue and function restored. He describes his method in detail, and claims that in over 350 operations within the past ten years not a single death occurred, and in only a few badly-nourished patients were perforations observed. The features of the operation are its simplicity, the rapidity with which it can be performed and its safety. The operation is only intended for the cartilaginous septum, and he deprecates any forcible breaking of the bony deviations. Roe thinks that in order to bring the septum into a straight line it is usually necessary to fracture the deviated anterior osseous portion, and for this purpose he uses a special pair of forceps. After the osseo-cartilaginous portion of the septum is thoroughly broken up, which is done by rotating the blades, the septum is readily brought to the median line and placed in any position desired, allowing at the same time rotation at the attachment of the cartilaginous portions, which point he especially emphasizes as a special feature of the operation. Watson's method detaches the base of the deviation and moves it over toward the opposite side, breaking up the bony septum of the deflection and molding it into line. He claims the points of his operation to be: "All the cartilaginous septum down to the angle is utilized to form the new septum. Elimination of the redundancy is provided for. A firm point of support, the bony base of the septum, is provided to counteract the resiliency of the cartilage. Deflection of the bony septum is corrected. It does not transfer thickened angles and redundant tissue to the other nostril." Gleason makes a U-shaped incision through the lower part of the deviation, and pushes the angle of the deviation through the opening. Douglas' paper is more fully illustrated than any of the others, and his plan of operation is to perforate the septum at the point of greatest convexity and cut along the lines of deflection in whichever way they may extend, destroy any elastic bands in the submucosa and bend the septum away from the obstructed side. Splints are kept in the nostrils. He briefly describes his operation as consisting of four steps: 1. Button hole the septum at the point of greatest obstruction and incise obstructing ridges of convexity in the line of convexity. 2. Break with forceps all fibrous bands and separate cartilage from the superior maxillary spine at the floor of the nose. 3. Overlap cut edges and introduce splints. 4 Treat antiseptically for two weeks.

52.—Abortion and Miscarriage.—Parker believes that the best treatment in cases of threatened abortion, when the probability is that it will be impossible to save the fetus, is to help nature and hurry delivery as soon as possible. He gives his method of operation.

53.—False Tonsils.—This paper, read before the New York Institute of Stomatology, reviews the effects of enlarged tonsils, both faucial and pharyngeal, and Dawbarn classifies the bad results as: 1, high narrow arch of the palate; 2, the insufficient development of the upper jaw; 3, the imperfect, irregular dentition; 4, tendency to decay, especially of the teeth nearest the growths, and to various types of stomatitis and gingivitis induced by the microbes harbored in the interspaces of this vegetation. As regards the high narrow palate, he believes that there are six separate factors in its causation. The first is a mechanic one. The enlarged tonsils are dragged down mechanically by the food, and being adherent to the pillars of the pharynx, these pillars pull down on the sides of the bony palate to which they are attached. This process going on for months and years must have a tendency to narrow the palatal arch. The second factor is the narrowing of the arch thus induced, causing the teeth of the upper jaw to move toward the inner side of the unaffected dental arch of the lower jaw. As soon as such process is fully started it will increase itself, as every time the teeth are firmly opposed they will tend to maintain the narrowness of the arch. The third factor is due to the fact that with the pharynx so filled up the child has become a mouth-breather and the nasal air-passages no longer have their former function. They become comparatively useless and from all sides nature begins to close in upon this waste space, largely, perhaps, from atmospheric pressure. The rising of the arch of the palate, the floor of the nose, is a step in this process. In the case of young mouth-breathers, the still soft bones of the upper jaw yield to the downward traction of the soft parts on the sides of the face pulled down by the weight of the lower jaw, thus increasing the tendency to bring the sides of the arch nearer to each other. In some cases the narrow arch is probably to be accounted for as a feature of inheritance, and in a few as a stigma of degeneracy. Normally the tongue against the roof of the mouth supports the latter and maintains its normal shape while the bones are soft in nose breathers. In mouth-breathers the tongue cannot exert this action. As regards irregular and imperfect dentition, it is readily explained since it is in the same class with numerous other physiologic processes effected by an insufficient oxidation and poisoned saliva and mucous secretions with consequent anemia and malnutrition. The tendency to decay, mentioned, explains itself. He suggests that the tendency to thumb sucking in children should be encouraged, as it prevents mouth-breathing at the same time. The treatment of this condition is solely operative.

55.—Nervous System and Mental Declarations.—Gray's paper is simply a few generalities of the nervous system.

58.—Drug Habits.—In this article Patterson condemns the effect of using any depressing sedative agents in curing the morphin habit, and maintains that the use of heart tonics, strychnia and general supporting treatment is better, also building up the nervous system with the withdrawal of the drugs.

59.—Hypnotized State.—Mental suggestion is the subject of McDonald's paper, and he seems to accept it as a recognized fact. It is a little difficult to explain his cases reported, except on the basis of self-deception or credulity, unless we admit some actual but not apparent suggestion through the senses of the subject. According to McDonald's article, however, he would seem to believe that the exercise of the will of the operator may act as a suggestion. The paper is hardly a satisfactory scientific one.

60.—Apomorphin.—According to a popular notion in Oregon it appears that lard or tallow is believed by stockmen to be an efficient antidote for strychnin. Stanley mentions this fact to call attention to what he thinks is a very satisfactory remedy, namely, apomorphin. He says that it will prove a sure antidote if given hypodermically, so as to act at any time before paralysis of the respiratory nervous center occurs. He mentions a case of a woman who had taken 5 grains of sulphate of strychnin with suicidal intent. She was pregnant seven months. Violent convulsions had set in before he arrived, and he immediately injected nearly 0.5 grain of apomorphin into her

arm. She had only one more convulsion, and in fifteen minutes all convulsions had ceased, but no one ever saw a sicker mortal than the patient. The entire contents of the stomach were evacuated. Twenty-four hours later no effects of the drug or its treatment were perceptible, and two months later she was delivered of a healthy child.

64.—Notes on X-Rays.—In this article Morgan expresses his preference for a static apparatus, as the best and safest for X-ray work, and gives a picture of his laboratory arrangements. The only burn he has seen from these rays was on his own hand, resembling common sunburn and giving no more inconvenience. He thinks the day of X-ray pictures is passing, as better work can be done by an expert with a fluoroscope. Experience and skill are required, but methods of localization are simple and easily contrived. He illustrates some of his own by the use of wires, etc., around the member examined. To make any localization complete, views should always be taken in two or more directions so that all the conditions and positions are shown. In conclusion he refers to the diagnostic value of the X-ray in other departments of medicine than surgery.

66.—This paper here printed as an original, appeared elsewhere and was abstracted in the JOURNAL, May 13, ¶ 58, p. 1046.

68.—Our Methods of Defense.—This paper is the annual oration delivered before the Texas State Medical Association, and is in substance a plea for more thorough medical legislation in the interests of the people and the profession.

69.—Medical Gynecology.—Cook reviews the various symptoms met with in gynecologic cases, such as nervousness, headache, backache, etc., and their treatment. As to headache, he thinks that when it is occipital, we may question the heart, kidneys, or bowels, and he mentions a case in which he was called in to see a lady in a cyanosed condition due to large doses of coal-tar products for the relief of those symptoms, which he quickly relieved by digitalis, the cause being a weakened heart. Renal insufficiency is also another cause and can be detected by urine examination. Constipation is still more important, and unloading the colon will often have a most excellent effect on this as well as other symptoms. Backache may be dorsal, lumbar or sacral. Dorsal backache generally has the stomach or liver for its cause. Lumbar backache frequently depends on the bowels and kidneys. Sacral backaches find their cause in the pelvic organs, and the uterus and its appendages should be looked after. The respiratory tracts, the nose and pharynx, should also be looked after, and he thinks that these troubles are often caused by imperfect excretions, and brisk purgation is the best treatment. With gastric intestinal and hepatic disorders, daily laxatives, lavage of the stomach, etc., are indicated. The paper closes with a reference to renal insufficiency and insists on the importance of the examination of gynecologic patients by due estimation of urinary solids.

70.—See abstract in JOURNAL, May 6, p. 1000.

71.—Hernia of Pregnant Uterus.—Macon reports a case of a colored woman of over 30, who had a gradually enlarging ventral hernia till at last it contained the whole pregnant uterus, which hung inverted down to within an inch of her knees. When her time came for delivery it was accomplished without difficulty by raising the organ and exerting manual pressure to make up for that usually exerted by the abdominal muscular walls. A second pregnancy also terminated favorably in the same way, the only difference being that there was a breech presentation. The patient refused to submit to an operation to relieve the condition.

74.—See ¶ 66, above.

82.—Rectal Fistula.—Pennington's paper is a detailed and quite fully illustrated one on the surgical management of rectal fistula. Two cases are reported.

83.—Pericystitis in Puerperio.—This is an inflammatory infection of the perivesicular cellular tissue, especially at the anterior sides of the bladder, which Kolischer thinks should be considered as a special disorder complicating the puerperium. It usually occurs after a severe protracted labor when the head has pressed against the pelvis for a long time, or when emptying the bladder at the proper time has been overlooked, or a difficult forceps delivery has been necessitated. He attributes the trouble to a traumatic hemorrhage occurring under these conditions. He has found hot bladder irrigations, hot poultices to the lower abdomen and ichthyol suppositories useful in the treatment. He suggests surgical interference may be advisable sometimes in acute cases.

84.—Family Forms of Paresis and Tabes.—Moyer reports a very interesting case of a family group of tabes and paresis. The father died at 50, it is said of consumption, though intemperance was suspected of contribution; no positive history of specific disease; mother living, aged 53, with well-developed tabes. The oldest son, 21 years old, has ataxia, absent knee-jerk and optic atrophy; the youngest, aged 16, is a rather typic paretic; a daughter, aged 18, is healthy. The record is a very interesting one, as cases of homologous heredity of tabes and paresis are rare, and the coincidence of disease in three members of two generations in the same family is still more so.

85.—Symphysiotomy.—In this paper McKennan describes and illustrates two rather striking cases in which symphysiotomy was performed. He emphasizes the following points: 1. Symphysiotomy is not so formidable but that it may be performed by any physician of ordinary ability. 2. The patient must be free from sepsis and free from exhaustion. 3. The technic is immaterial so long as it is clean and expeditious. 4. The after-treatment demands absolute immobility of the divided symphysis and daily inspection and cleansing of the patients by the physician. 5. Expensive beds and apparatus are sometimes convenient, but are not necessary for the success of the operation. 6. The patient may be operated on in her own home, among her own surroundings and by her own physician.

87.—Right Marital Living.—This article deals chiefly with what the writer calls the "love function," in regard to which she quite daringly enters into details that are not ordinarily discussed in print.

93, 94, 95, 97 and 98.—These papers were printed in full in the JOURNAL of June 10.

100.—Incision by Rectus in Appendicitis.—Kammerer's paper describes his method of making an incision for the operation for appendicitis by drawing the rectus muscle sharply toward the median line after division of the aponeurosis of the external oblique, thus making the incision through the abdominal wall in different vertical planes, and thus obviating the danger of hernia. The criticism made, that it is liable to injure the nerves and produce atrophy of the muscles, he thinks not carried out. He has not seen it cause bad effects in the cases on which he has operated. He tabulates eighteen cases to show results of this method of operation. In none of them is there any hernia.

101.—Local Anesthesia.—Johnson goes over the subject of local anesthesia. He thinks that it should be limited to operations small in extent and simple in technic, of short duration, and to those other cases, comparatively rare, where there are strong objections to the use of general anesthesia. He describes the method of painting or spraying the surface, subcutaneous injection, injection into the sensory nerves and the use of salt solution. Eucain seems to have several advantages over cocain or tropococain for this purpose, as being less toxic and more easily sterilized.

102.—Diphtheritic Conjunctivitis and Antitoxin.—Bell reports a case of conjunctivitis in which the Klebs Loeffler bacillus was found by culture, and which recovered rapidly under injection of antitoxin, local treatment having been ineffective. Two injections of 1100 and 900 units were given. He refers to a case of Darier's in which similar treatment was successful in a case of pseudo membranous kerato-conjunctivitis.

103.—Gonorrheal Ophthalmia.—Jamison thinks that it is important to diagnose gonorrheal ophthalmia as early as possible, so as to apply abortive treatment, which would not be suitable for ordinary catarrhal conjunctivitis. The positive diagnosis is only made in the early stage by microscope, though later the intense swelling of the lids, chemosis of the ocular conjunctivitis and purulent discharge are unmistakable. He believes that it is necessary to perform a slight operation, cantholysis, that is, cutting of the lid at the outer canthus so as to better expose the conjunctival cul-de-sac. He then applies nitrate of silver (40 grains to an ounce), with a small pledget of cotton, being careful not to touch the cornea, and immediately neutralizes the silver with a solution of sodium chlorid, and then begins the application of the iced cloths, changing them every ten seconds until the reaction has subsided, the eye in the meantime being kept clean with boric acid. It may be advisable to make a second application in twenty-four hours, but he does not always find it necessary. He claims the results of this method are good.

104 and 105.—These papers were printed in full in the JOURNAL of June 10.

106.—Voice in Diagnosis.—This paper of Dr. Skene's takes up the changes of the voice which may occur in different conditions and be of value as indicating morbid states. He first notices the differences in the cry of infants, the normal cry, indicating hunger; the cry of irritability or pain; the changes with respiratory disorders. All these are in too much detail

to be well abstracted. He next notices the morbid state of the voice, indicating circulatory disturbances, cases of heart disorder and Bright's disease, indicating hyperemia of the vocal cords, lowering and modifying the tone and quality. Anemia raises the pitch of the voice and a concealed hemorrhage may be detected by one whose attention has been called to this point. He also refers to the importance of noticing the condition of the voice as indicating the nervous state before performing major operations, and also its testimony as showing the amount of shock after an operation. The voice is also of value as indicating the reaction from this condition and sometimes is the first and only symptom. The voice as an indication of apathetic conditions is also of importance and frequently of very valuable prognostic significance. There is a liability to take this apathetic tone as an indication of contentment and thereby being led to the wrong diagnosis. He concludes by speaking of the expression of the voice after abdominal operations and the peculiar voices of the insane. The last, however, he does not venture to remark on extensively. He says that it is necessary in order to thoroughly utilize this feature in diagnosis, to have had considerable experience, a normal sense of hearing and ready appreciation of the varieties of quantity and characteristics of sound, but especial refinement of the sense is not necessary.

107.—Vaginal Douches.—Boston criticizes the use of vaginal douches and concludes that a profuse leucorrhea during the latter months of pregnancy is no indication for vaginal douches, that the chemic reaction of a discharge has but slight effect on its antiseptic power. The vaginal secretions of pregnant women, rarely if ever contain pathogenic germs, except gonococci. Vaginal douches favor the development of cervical gonorrhea and puerperal sepsis. The vaginal secretions may contain streptococci, staphylococci, diplococci and bacilli, all of which may be non-pathogenic. A discharge from the cervix may show the presence of pathogenic bacteria after all other symptoms of sepsis have disappeared.

108.—Pneumonectomy.—The subject of this paper, according to the author, covers a method which he believes will be extensively used in the future treatment of pulmonary tuberculosis. As most cases of this disorder start with a single focus of infection, he thinks that a well-directed pneumonectomy would be absolutely curative. He has studied the subject since 1894, experimented extensively on dogs and believes that excision of diseased lung is not only possible but comparatively easy. In his experiments he has opened the thorax, taking care to avoid extensive introduction of air into the pleural cavity, seizing the lung, engaging it in the wound to prevent this accident, and having determined the amount to be removed, has passed a ligature around the base of the mass drawing it so tight that the bronchial and lung tissues are forced into a solid mass, then applying a narrow-bladed clamp outside the ligature, the part is removed by a cautery, the clamp removed and the disengaged stump dropped into the pleural cavity without further attention. The edges of the pleura are stitched up with a continuous suture, as is also the external wound, and a collodion dressing applied. The labored breathing will continue for a while until the complete absorption of the air in the pleura, but he thinks this gives a partial rest to the lung and is therefore of advantage. The great danger is death from hemorrhage, hence the importance of the ligature being tight. He has been surprised in his experiments on dogs to find that after two to four weeks' convalescence, there was great difficulty in locating the scar on the lung. Sometimes no evidence of the stump remained. He thinks that the operation is perfectly feasible in man, and suggests what an advantage would be the use of condemned convicts for experiments.

109.—Medical Gynecology.—Dr. Savidge's paper dwells on the importance of congestion and debility as influencing the cause and symptoms of female disorders and the benefit that is sometimes derived from rest and non-surgical treatment in these cases. He asks what women did before the specialist on gynecology evolved, though undoubtedly the requirements of modern life have made this specialty necessary. He believes that discussion of this subject is of value even if incorrect views are sometimes stated.

110.—This paper appeared in full in the JOURNAL of June 10.

111.—See abstract in JOURNAL, June 10, p. 1316.

112.—This paper appeared in full in the JOURNAL of June 10.

113.—Climate and Sea Voyages in Tuberculosis.—Weber reviews the various climatic and other conditions of resorts for consumptives in this country and Europe, and also the influence of sea voyages on consumptives. He emphasizes the importance of the constitutional or personal resistance of the patient, and in cases of weak constitutions we must be guarded in recommending high altitudes and long sea voyages and give preference to warm, sheltered and sunny places. In strong constitutions, mountain climates and occasional long sea voyages are to be preferred. Where there is only slight disease of the apices of the lungs and slight fever, any climate and especially high altitudes and sea voyages, will do, but if fever is high, patients must first be treated at home. Extensive disease with only slight fever is generally best treated in a moderate elevation, or warm seaside localities are most advisable. In advanced disease with fever, long journeys should be avoided. In progressive tuberculosis with scattered foci in both lungs, home treatment will probably be best, and chronic, slowly progressing cases appear to do best in warm winter climates and sometimes with sea voyages. Quiescent cases with extensive damage are generally better in only slight elevation. Albuminuria without fever indicates avoidance of high altitudes and the selection of a dry climate. Moderate diabetes does not exclude high altitudes, but advanced diabetes and emaciation do; also cases where tuberculosis is secondary and diabetes the primary disease. Chronic cases with much catarrh require places with as little wind as possible, but in the young, high elevations with little wind are sometime preferable. High altitudes are contraindicated in chronic cases with extensive emphysema. These cases require warm winter resorts. Where asthma is a complication in the majority of relatively young persons, high elevations should be preferred. Older persons do better in moderately warm locations and slight elevations. In all climates selection of the dwelling-house is of great importance. It should be sunny, sheltered from wind and dust, built on dry ground, and removed from stagnant water and swamps and impure air of factories, etc. All healthy climates can be used as long as a good diet and plenty of time in the open air can be obtained, but high altitudes and marine climates have advantages—the former rather against tuberculosis and the latter, including sea voyages, against scrofula. The cure of tuberculosis is possible in the early stages in all healthy climates, but some have special advantages, notably high altitudes. In all cases, however, medical supervision is necessary, and treatment in sanatoria is therefore preferable, and for the poor it is a necessity. The erection of numerous sanatoria is therefore a national requirement for the cure, prevention and extermination of tuberculosis.

114.—Vertigo.—Zenner reviews the general subject of vertigo, its pathology, variations and treatment. He disagrees with Mendel in holding that the relation of the labyrinth to vertigo is proven incontrovertibly by clinic facts. Perhaps we should believe with Adier that objective vertigo (apparent movement of visible objects) is due to anomalous eye movements, and subjective vertigo (feeling as if the individual were moving), is due to the labyrinth. Gastric vertigo, often falsely so diagnosed, with the toxic form, is probably due to labyrinthine involvement, and the same may be true to some extent in the vertigo of arteriosclerosis. Neurasthenic vertigo is doubtless of cortical origin, and in all cases the cerebral centers, the subcortical one of equilibrium and the cortical one of conscious sensation, are to be considered. Organic cerebral vertigo is commonly associated with disease of the medulla, pons, cerebellum and corona cerebelli. The treatment consists chiefly in relieving external causes and abnormal bodily conditions, attention to constitutional states, nervous irritability, etc. Syphilis, gout and rheumatism may need appropriate treatment; the vertigo of arteriosclerosis requires special attention to that condition. Small doses of iodids, nitroglycerin, stimulants, etc., are in place.

115.—J. Hughes Bennett.—Johnston's review of Bennett's life and work emphasizes his services in introducing the microscope into medical practice, his pioneer work in blood examination, his revolutionizing the treatment of pneumonia, and his general opposition to persistent errors and useless dogmas. His accurate clinic methods have had a far-reaching and prolonged influence in England, and above all in this country.

117.—Epithelioma.—McConachie prefers the caustic to the knife in the treatment of epithelioma, as more thorough and less disfiguring. The stronger caustics only are of value—caustic potash, zinc chlorid and arsenic. The latter, in the form of Marsden's paste (2 parts arsenious acid, 1 gum acacia), he thinks is best in epithelioma of the face. Electricity and the Paquelin cautery are not to be relied on, especially when large areas are involved.

118.—Paretic Dementia.—In this article Bremer holds that the demented type of paresis is gradually supplementing the typic form; that syphilis is not its exclusive cause, though antecedent in perhaps 95 per cent.; that it is spreading in all classes and becoming more frequent in the young; and that its

extension among the Jews is also a striking feature of the present time. He favors the view that some original defect of the brain is an essential condition. Bremer also mentions the fact that paresis is becoming the dread of syphilitics; that there is a disease—perisephobia—which has not heretofore been much noticed by writers on the subject. The prognosis is uniformly bad, but he does not say there are no recoveries. A partial and temporary recovery is entirely possible. As regards its pathologic anatomy, it is an accepted fact that the more exuberant the interstitial proliferation, the more profound the dementia. The paper concludes with notes of two cases in which the usual microscopic changes were lacking.

120-123.—These papers were printed in full in the JOURNAL of June 10.

124.—Respiratory Failure in Brain Injury and Diseases.—Hudson's paper emphasizes the importance of respiratory failure in causing death in case of intracranial pressure, and that we may be able to save life by artificial respiration in cases of injury to the brain until hemorrhage is stopped and the wound otherwise attended to. He thinks that in operations on the brain, especially those involving the posterior cerebral lobes and cerebellum, whether or not there are signs of special intracranial pressure, we should be prepared to use artificial respiration. The Fell-O'Dwyer apparatus should be an adjunct at hand with an expert to use it in such cases.

125.—Bacteria and Cold.—Ravenel has experimented with anthrax spores, diphtheria cultures, typhoid-fever cultures and bacillus prodigiosus to test their virulence in extreme degrees of cold. He immersed these germs in liquid air at a temperature of 312 F. below zero for a period varying from one minute to one hour, and in case of some to several hours, and in no case were the bacteria killed, nor could any inhibition even be detected. He therefore concludes that cold is an efficient disinfectant and liquid air, in spite of all claims to the contrary, can not be regarded as a germicide.

FOREIGN.

British Medical Journal, May 27.

Remarks on Proper and Improper Burial, with an Examination of Claims made for Cremation. FRANCIS SEYMOUR HADEN.—This paper is in defense of earth burial and an argument against the alleged advantages of cremation. The author goes over former publications and correspondence on the subject, quite thoroughly, and maintains that the chances of sowing pestilence in the soil, by interment, are practically disproved, and that the earth is the natural disinfectant.

Lecture on Some Cases Illustrating Surgery of Stomach. ARTHUR E. BAXTER.—This paper reviews and analyzes 7 cases of gastric surgery performed within the last few months. In 5 the Murphy button was used; all were cases of posterior gastric enterostomy. In spite of the fact that the button worked well, Barker does not appear to believe that it is the best method, and claims that with the largest button that can be used with safety in the jejunum, dangerous contractions have occurred, whereas, with lateral anastomosis, with suture, any desired size of opening may be secured. As regards performing this operation as a preliminary to pylorectomy, he thinks that the time will come when both will be done at one operation. If we take the results of the last few years with gastro-enterostomy, the mortality will probably be under 10 per cent., and Barker believes that the time will come when these cases will be put still earlier in the hands of the surgeon with still better results. In cases of gastric carcinoma, it is almost impossible to select the proper cases for operation unless they are seen earlier than has hitherto been the rule. Many cases are unsuited for operation, and he refers to Kronlein's statistics as showing the conditions and possibilities, and also the results. Next to the early recognition of the condition of the stomach and the decision as to whether operation is feasible, comes the question of technic. In every case careful preparation of the patient is necessary, including a thorough cleansing of the abdomen externally and of the stomach internally. The latter should be washed out several times for a couple days before operation, except in cases of gastric ulcer. The saving of time in the operation is of great importance, as well as thoroughness and after-treatment, keeping the patient warm, using normal saline solution injections, if necessary, rectal feeding, etc.

Operation for Gastric Hemorrhage and Perforation. A. H. TUBBY.—The author reports four cases of operation for gastric hemorrhage, mostly from perforating gastric ulcer; recovery in one case. Cases of this kind may be classed as acute and chronic, according as the perforation is directly into the peritoneal cavity or is bounded by adhesions so as to form a circumscribed abscess. The mode of procedure differs in these two cases. The diagnosis of acute perforation is generally not difficult, and the all important question is one of time. Statistics show that of cases treated surgically within the first twenty-four hours, over 40 per cent. recover. The difficulty of finding the perforation, suturing it, and the difficulties of cramped location, the softened state of the stomach walls, and the cleansing of the peritoneum from the stomach contents, are great, but may be overcome with proper assistants, good light, special care in suturing, thorough irrigating of the peritoneal cavity with normal salt solution, and efficient after-drainage.

Surgical Treatment of Uterine Cancer and Its Recurrence. THEODOR LANDAU.—In this paper this well-known author advocates vaginal extirpation of the uterus and its appendages in cases of carcinomatous disease. His results with this treatment are: in 123 cases, 8 died from the operation; in 48 the operation was done more than five years ago and of these 13 (27 per cent.) have remained well. According to this, with his method, 25 per cent. of permanent cures may be effected. The next method the author mentions is that of improving the permanent results by systematic removal of recurrences, as suggested by Rosenstein in 1898, and reports a case in his own practice.

Experimental Inquiry into Quantity of Volatile Acids in Stomach. L. LENEY AND VAUGHAN HARLEY.—This paper gives the results of experiments as to volatile acidity of the stomach and it appears that the apparently normal stomach contains a certain amount of these acids, but so long as the quantity of free hydrochloric acid secreted by the stomach is sufficient and the gastric motility is not interfered with, this quantity averages not over 3.2. In case of the decrease, however, of the free hydrochloric acid, the volatile acidity averages 7.6. The results of these investigations confirm those of Hoppe-Seyler, that the quantity of free hydrochloric acid influences the quantity of volatile acid in the stomach.

Lancet, May 27.

Radiography, with Special Reference to Detection of Renal Calculi. C. MANSELL MOULLIN.—The author speaks of the difficulty of radiography when photographing structures that lie deep in the tissues, such as renal and biliary calculi. He thinks it better to make thorough examination with the fluorescent screen before attempting to make the photograph. When both methods are used the screen tells a great deal more to the skilled observer than does the photographic plate. He is not prepared to say that this advantage of the screen over the plate will be permanent, as the art is still so immature. As regards the use of the coils or static machines for X-ray work, he considers it impossible to make any definite statement, but he speaks very highly of the Wimshurst apparatus. An advantage of this is that the current from it is quite harmless, and if the patient should get into the circuit no serious damage could be done, while a similar accident with the coil would be exceedingly inconvenient. Within the last few weeks, however, the use of a new principle—the Wehnelt electrolytic break—has greatly increased the power of the coil and enables us to obtain results previously impossible. As regards the renal calculi, the condition of the patient and the composition of the stone are both matters of importance. If the patient is thin and the calculus of oxalate of lime, positive results can usually be obtained. Phosphatic calculi are harder to detect and those of uric acid or urates still more so. If the patient is stoutly built and muscular, success is less certain. He thinks, however, with the use of the Wehnelt interrupter, better results will be obtained. In difficult cases such as these every endeavor must be made to reduce the thickness of the tissues by purgatives or enemata. The position of the patient is also a matter of importance. The erect position fixes the object better, but crowds the liver down in front and increases the antero-posterior diameter of the body. Moullin prefers to have the patient recumbent with the back well arched, and the light passed through in both directions, with a screen or plate used both in front and behind. To prevent movement of the calculus, from respiration, the patient is directed to hold his breath as long as possible and the exact distension of the thorax noted. Then he is allowed to breathe until he has recovered himself and then directed to hold his breath a second time with the thorax in the same state of distension. This is repeated as often as necessary, the light being only switched on during the period of apnea, when the thorax is at rest and the kidneys and calculi are presumably occupying the same position relatively to the light. As regards biliary calculi, they are still more difficult, owing to their very low absorptive index. The difficulty is greatest when inflammation is most wanted, that is, when the calculus is not in the gall-bladder but in the ducts and when the patient is stout and the abdomen firm.

Wound of the Right Ureter During Ovariotomy; Suture; Fistula; Recovery. R. LAWFORD KNAGGS.—This paper reports a case of partial severance of the right ureter during ovariotomy, which was cured by suturing. The greater part of the paper is taken up with the general discussion of the surgery of the ureter, in which he calls attention to the amount of work that has been done in this line in America and on the Continent of Europe as compared to that in England, and does full justice to the contributions of Van Hook, Kelly and others of this country. He tabulates the published cases of the different operations—uretero-ureteral anastomosis, implantation into the bladder and bowel, and believes that vesical implantation and ureteral anastomosis have each their proper sphere, but sees little advantage in rectal implantation, though he evidently is not aware of the recent successes in this country with this operation, by Fowler and others. Grafting on the skin and in the vagina are merely temporary and palliative measures.

Intestinal Obstructions. R. C. ELLSWORTH.—This paper is an address given before the Swansea Medical Society, and discusses the causes, conditions and treatment of intestinal obstruction. The author emphasizes the following points: 1, that a patient may suffer from fatal obstruction and not present the classic symptoms; 2, that the symptoms of obstruction vary with the site of obstruction; 3, that early and definite diagnosis is essential; 4, that the use of aperients is likely to do harm; 5, that exhibition of opium is likely to mask the symptoms and produce delusive signs of improvement; 6, that the time during which operative treatment is likely to be successful is very short; 7, that the bowels must be evacuated at the time of the operation, or the patient may die poisoned by his own excrement; and 8, that it is probably safer to be content with colotomy or enterotomy, when the bowel is seriously damaged, than to attempt an operation for anastomosis.

Cure of Acute Ascites Due to Liver Cirrhosis by Operation. RUTHERFORD MORISON.—This paper is offered as additional evidence of the value of operation to relieve the obstructed portal circulation by the establishment of an efficient anastomotic one. He also, besides reporting a case, gives the post mortem of the first successful case, who died two years after the operation, showing that a successful anastomotic circulation can be produced. He has operated on four cases. Two were uncomplicated and both were cured; in one the diagnosis was doubtful, and in another the complications precluded recovery. His conclusions are that ascites due to liver cirrhosis can be cured by the establishment of an efficient anastomotic circulation. Adhesive peritonitis produces adhesions between the abdomiual contents and its parietes, in which new blood-vessels form. If they are needed they remain permanently. The operation described by Drummond and himself (*British Med. Jour.*, Sept. 19, 1896) is the safest and most certain method to produce adhesions. It is no longer advisable to treat ascites due to cirrhosis by repeated tappings, if the patient is otherwise sound and in fair general condition. After one or two tappings have failed, operation offers the best chance of prolonging a useful life.

Medical Press and Circular (London), May 17.

General Health as Factor in Skin Diseases. MORGAN DOCKRELL. The author calls attention to the importance of general health in affecting the progress of various skin diseases. First referring to these cases where internal treatment is said to be unnecessary, he mentions the eczema which affects barmaids, washerwomen and hairdressers where their general health becomes impaired. The irritation of occupation in these cases can only be best relieved by improvement in the general health. Warts are another condition similarly subject to these influences, and also abnormal growths of hair in women. General health and genital irritation must be taken into consideration, as well as the local treatment by electrolysis, etc. Under the second head, he notices conditions of health requiring treatment quite apart from certain orthodox internal remedies advised for particular diseases. Among these conditions of general health that effect the progress and prognosis of skin diseases, he mentions overfatigue, worry, sexual indulgence and uric acid.

Bulletin de l'Academie de Medicine (Paris), May 16.

Immobilization in Treatment of Wounds of Chest. LUCAS CHAMPIONNIÈRE.—The conclusions of this study of bullet and perforating wounds of the chest proclaim the importance of immobilization and abstention, exactly the reverse of the indications in perforating wounds of the abdomen. The dangers of pleuro-pulmonary wounds are immediate hemorrhage and a special kind of nervous shock. Rapid almost fulminating death may result from these accidents if exaggerated by the slightest movement. On the other hand, immobility of the body, of the larynx and of the mouth helps rapidly to control them. Immediate immobilization even on the spot is required, refraining from auscultation and every intervention, leaving the bullet to take care of itself. Moderate injections of serum, and possibly of morphin, are indicated, with fluid and easily digested food and repeated purgatives. Secondary and infectious accidents are rare when the wound has not been infected with the fingers, the instruments, or fluids injected.

Presse Medicale (Paris), May 24.

Early Hereditary Obesity.—A. CHAUFFARD. "After a relative decrease in weight has been secured with dieting and exercise, commence thyroid treatment, but only administer it one week at a time, alternating it with Carlsbad salts every other week." A hypertrophic cirrhosis of the liver was noted at the autopsy of a case described in detail, fatal at 34.

Semaine Medicale (Paris), May 24.

Splenic Origin of Hepatitis. A. CHAUFFARD.—A number of supposedly well-established facts are upset by the propositions advanced in this article, which ascribes the primary and most important rôle in infectious lesions of the liver to the spleen. The writer cites facts which prove the splenic origin for "malarial liver," for the "leucocythemic liver" and the hepatic lesions in typhus, and calls attention to the splenic endophlebitis noted by Kelsch and Kiener in chronic malarial infection, as the track and trail of the infective process. The frequency with which splenomegalia is noted in icterus, cirrhosis, etc., is not a mere coincidence, but is a natural sequence of facts, starting with the so-called primary splenopathy without any reaction proper on the part of the liver, passing the chronic splenomegalic icterus described by Hayem and leading to the venous atrophic forms of cirrhosis described by Popoff, Gilbert and Fournier. The compensating antitoxic rôle, attributed to the spleen in affections of the liver is contrary to the facts; it is the liver that compensates the spleen, and arrests, neutralizes or destroys the microbes and the toxins brought to it by the splenic portal vein.

Revista Medica de Bogota, xxi, 236.

Leprosy and Necessity of Isolation. R. AZUERO.—The numbers of lepers attracted to Bogotá by Carrasquilla's serum treatment have rendered leprosy the dominant question in Colombia. Azuero calls attention to the fact that arthritic manifestations of some kind always, and eczema usually, precede the leprosy and also that prostitution is the most frequent means of contagion. Women do not seem to shrink from cohabitation with lepers, and he has never known a single case in which they were infected by coitus with a leper, but numerous authenticated cases demonstrate that other, healthy men with whom they have sexual relations afterward, become infected. He has observed forty and Carrasquilla over a hundred cases in which the husband or wife remained unaffected by the other's leprosy through a long married life together, and suggests that science may yet discover nature's method of this slow gradual immunization and utilize it in favor of persons exposed to contagion. He cites a number of instances of cases of direct contagion from handling articles used by a leper, and also mentions the fact that not a single case of contagion has been known at Loro, a town of 1000 inhabitants, with a leprasorium, where there is no attempt at isolation, during the eighty years it has been established. He suggests as a possible explanation the location on the seashore, as the frequent bathing in the iodinized sea water may prevent infection.

Centralblatt f. Chirurgie (Leipsic), May 27.

New Modification of Cheiloplastics. J. SILBERBERG.—"If it is possible to retain a fragment of the lip at each corner after square excision of a neoplasm, a cosmetically satisfactory lip can be made of lip tissue by drawing these fragments of the lip together after carrying an incision horizontally up on the cheek to obtain slack enough to mobilize the fragments of the lip. Another parallel incision at the bottom of the defect, extending each side, allows the mobilization of the lower edge of the flaps thus obtained. In case of wedge-shaped excision the mobilizing incisions are made obliquely upward from the corners of the mouth and then extended downward, forming an inverted V, with the point toward the ear."

Deutsche Medicinische Wochenschrift (Berlin), May 25.

Phthisis and Tuberculosis. C. BAUMLER.—After expatiating on the fact that phthisis is the greatest danger that confronts the person affected with pulmonary tuberculosis, and discussing means to ward it off, Bäumler reviews the various affections that may simulate phthisis: chronic processes from the inhalation of dust, bronchiectatic cavities with putrid bronchitis, chronic interstitial pneumonia, pleuritic effusion, latent ileotyphus, septic diseases and especially syphilis, polymorphous erythemata, etc. Another class includes tumors in the thorax, actinomycosis and echinococcus of the lungs, although the absence of much fever and of the diazo reaction militates

against the assumption of phthisis. Blood in the sputa may denote a mitral stenosis or aneurysm of the aorta. Ulcerative endocarditis is frequently mistaken for phthisis, and also infarction of the lung. A correct diagnosis is imperative, and no one should decide without careful auscultation, percussion and microscopic examination of the sputa for bacilli, tumor elements, fibrin clots, asthma crystals, and evidences of actinomyces and echinococci. The temperature must be studied a long while, not only at rest, but also after exercise (referring to Penzoldt's tests, JOURNAL, p. 993). The weight should be noted every week, and if all these tests result negatively, an injection of tuberculin should be made.

Muenchener Medicinische Wochenschrift, May 23.

Pulse as a Criterion for Puerperium. TORGGLER.—"The pulse is a much more delicate and exact expression of the conditions existing in the puerperium than the temperature, and should be recorded in all cases." Torggler urges the general adoption of Knapp's formula (*Ztft. f. Heilk.* xix, 2) as a standard for comparison. He cites as an instance of the greater precision attained, the effect of gonorrhea on the puerperium, as indicated by the pulse in 286 cases. In the group of subnormal pulse (under 60), gonorrhea was evident in 12.8 per cent.; in those with normal pulse (which he accepts as 61 to 80), in 22.1 per cent.; in the subfebrile group (81 to 100), in 40.7 per cent. and in the febrile (over 100), in 42.3 per cent.

Indications for Vaginal Myotomy. A. FUNKE.—An experience of 242 cases suggests the following indications: 1, submucous myomata of any size, if only the larger portion is in the small pelvis; 2, single submucous myoma of the fundus, if not larger than an orange, reached through the plica vesico uterina and the anterior wall of the uterus; 3, myomatosis uteri, which requires total extirpation; 4, small subserous myomata of the fundus, which require an anterior or posterior incision and the uterus drawn out and replaced. In case of hemorrhage with no special indications for a radical operation, curettement is indicated, repeated if necessary, with ergot. Evidences of compression, particularly in young women, require early enucleation of the small principal myomata. Palliative treatment usually requires a more radical operation later, but the interval may be long; in one case eighteen years elapsed after the myoma was first noted before it required removal; the patient had borne a child in the interim. Extreme anemia and debility are counterindications to vaginal myotomy as it is impossible to foretell the gravity of the intervention. In doubtful cases laparotomy is to be preferred on this account. The patient and her family must also be warned of the possibility of the necessity of total extirpation that may develop in the course of vaginal myotomy.

How to Render Statistics Valuable. O. v. HERFF.—The writer has myotomy especially in view and urges surgeons to have their statistics include exclusively the cases of death from hemorrhage during or after the operation, from injury to an organ, from septic inflammation proceeding from the organs opened during the intervention and from the shock of an operation requiring two hours and over by the method followed.

Treatment of Advanced Extrauterine Pregnancies. H. A. v. GUERARD. Three cases, four to seven months, treated by laparotomy as soon as diagnosed, the abdominal wound closed and sutured at once, with an incision in the vagina for tamponning and draining, have proved so successful that the writer urges others to adopt this method. The psychic effect on the patient is an important advantage in its favor.

Wiener Klinische Wochenschrift, May 18.

Argyrosis. M. MENZEL.—An otherwise healthy man who had been treated at v. Schrotter's clinic for nine and a half years, with local applications of a 5 to 10 per cent. solution of argentum nitricum, on account of chronic pharyngitis and laryngitis, now presents a pronounced case of argyrosis, the exposed portions of the skin a light gray color, becoming darker with increased congestion. A peculiar feature of the case is the appearance of nervous phenomena from abstention, compelling him to return for further treatment. Menzel concludes from his study of this case and others in literature, that if the drug is discontinued, the particles may be carried along and deposited in the lymph-glands in time and the subject thus recover, from the cosmetic point of view. The only drug which seems to promise any hope of relief is potassium iodid, which forms with silver a colorless iodid, but its success is doubtful.

St. Petersburger Medicinische Wochenschrift, May 20.

Balneotherapeutics in Tabes. GRAUPNER.—The beneficial results of balneotherapeutics are especially noticeable in the cases between 30 and 40 with slight objective sensory disturbances, but pronounced ataxia, attacks of pain and increased plantar reflexes. The ataxia is quite cured in a few weeks, appetite and strength revive and the results demonstrate that at this stage the disturbance is functional and not anatomic, merely a circumscribed process as yet in which the majority of the collaterals are not involved and are therefore capable of transforming the temperature stimulus of the baths into trophic stimulation. More advanced cases require careful individualization. The baths may increase the pains at first and may lead to exhaustion from a cumulative effect, but when successfully carried out, prove a great relief. The essential points in the treatment are the inability to control the temperature of the bath and the amount of carbonic acid and chlorid contained.

Societies.

COMING MEETINGS.

Colorado State Medical Society, Denver, June 20.
Indian Territory Medical Association, So. McAlester, June 20 and 21.
Minnesota State Medical Society, Minneapolis, June 21.
New Jersey Medical Society, Deal Beach, June 27.

Rhode Island Medical Society—.—The eighty-eighth annual session of this society was held at Providence, June 1, and that city was chosen as the next meeting-place.

Medical Society of State of Colorado.—The twenty-ninth annual meeting of this society will be held in Denver, June 20-22. About seventy-five papers are announced, with a symposium on pneumonia, one on lacerations of uterus, vagina and perineum, and one on gall stones.

Cape May County Medical Society.—This New Jersey society elected the following officers at a recent meeting: president, Alonzo L. Leach, Cape May; vice-president, John S. Douglass, Tuckahoe; secretary, Charles B. Corson, South Seaville; treasurer, Randolph Marshall, Tuckahoe; censors, V. M. D. Marcy and Walter S. Leaming, Cape May, and Benjamin T. Abbott, Ocean City.

Frisco Medical Society.—The second annual meeting of this society was held at Pateau, June 6. The following officers were elected for the ensuing year: president, B. T. McClure, Pateau; first vice-president, M. C. Wilson, Wister; second vice-president, I. T. Shuler, Canusan; secretary, W. E. Jones, Pateau. The next place of meeting will be Wister.

Association of American Medical Colleges.—At the recent meeting of this association, held in Columbus, the following officers were elected: president, Parker Ritchie, University of Minnesota, Minneapolis; vice-president, Edward Bentley, Arkansas University, Little Rock; secretary, Bayard Holmes, Chicago; treasurer, Harold Williams, Tuft's College, Boston. The association will meet next year at Atlantic City, N. J. The following colleges were admitted to membership in the association: medical departments of Kentucky University and Buffalo University; University of North Carolina; Meharry Medical College, Nashville, Tenn.

American Proctological Association.—A new medical society, to be known as the American Proctological Association, was organized by prominent rectal specialists at Columbus, Ohio, during the recent meeting of the AMERICAN MEDICAL ASSOCIATION. Its object is to give specal study to diseases of the rectum and colon. The following officers were elected: president, J. M. Mathews, Louisville; vice-president, J. P. Tuttle, New York City; secretary-treasurer, W. M. Beach, Pittsburg, Pa.; board of counsellors, S. T. Earl of Baltimore, A. B. Cook of Nashville, and J. R. Pennington of Chicago. The charter members are Drs. J. M. Mathews of Louisville, J. P. Tuttle of New York City, J. B. Bacon of Chicago, S. T. Earl of Baltimore, L. Straus of St. Louis, L. H. Adler, Jr., of Philadelphia, B. M. Ricketts of Cincinnati, C. C. Allison of Omaha, T. C. Martin of Cleveland, A. B. Cook of Nashville, S. G. Gant of Kansas City, W. M. Beach of Pittsburg, G. B. Evans of Dayton, Ohio, and J. R. Pennington of Chicago. The first annual meeting will be held in Washington, D. C., May, 1900.

Chicago Academy of Medicine.

Regular Meeting, held April 14, 1899.

(*Continued from page 1325.*)

DIETETICS IN RELATION TO HEART, KIDNEY AND LIVER.

Dr. R. B. PREBLE—Hoffman, in his "Principles of General Therapeutics," points out the necessity of protecting these organs. We must not only protect these organs from all unnecessary work, but the necessary work must be cut down to the lowest physiologic limit, and this least physiologic amount of work should be done in the easiest way possible. This is the fundamental principle in the dietetics of heart disease, kidney disease, and to a certain extent, disease of the liver. These organs must be protected in every way. It is impossible for one to lay down any more than the most general rules, because each case must be treated on its own individual merits. Not only that, but two cases exactly similar require different treatment, according to the social condition of the patient. The dietetic directions applicable in one case would be worthless in another, because there is no element in the entire range of therapeutics more influenced by social conditions than that of diet. Furthermore, a diet suitable for a patient to-day may be entirely unsuitable to him tomorrow, and so, in discussing this subject, only the most general principles can be laid down.

It does not make any difference what the pathologic process at play is, whether it be endocardial, pericardial or myocardial, the life and comfort of the patient will depend on the condition of the myocardium, and so long as it is able to do its physiologic work and to carry on the increased amount of work that results from the pathologic process, the life and comfort of the patient are sure. Every effort must be made to protect the weak myocardium from any additional work. Many influences are more important in their bearing on the myocardium than is diet itself, but still diet is an extremely important factor, because its influence is brought to bear on the heart at least three times a day. The error which is most commonly made is to overfeed patients. As is well known to us all, the physiologic necessities of the body are usually exceeded in diet. Whenever any of us eat a heavy meal we suffer more or less from cardiac disturbance or embarrassment—an additional amount of work is thrown on the heart. In the first place, with each meal eaten an exceptional demand is made on the gastro-intestinal tract. A large amount of the digestive fluids is secreted, and an additional amount of blood circulates more rapidly, we breathe more rapidly, and all of these things throw an additional strain on the heart. The first essential is to cut down the diet, the next to see that a patient not only receives a certain amount of food, but we should also notice that the various food elements are given in their proper proportions. The nutrition may be maintained even when one food element is widely below the proper amount, providing the other food elements are given in increased amounts, but that requires an additional amount of work on the part of the body, so that we must use albumins, fats and carbohydrates. It is said that one of the reasons why the so-called milk diet for the treatment of cardiac affections has been successful is because an exclusive milk diet is usually an insufficient diet, and on that account these patients are able to get along better.

Another necessary characteristic of the dieting of cases is that the food should be simple. We are all of us liable to attacks of gastro-enteritis, and one who has a diseased heart, even though the heart is doing its work well, is more liable to such attacks. Such attacks are always serious matters in one whose heart is diseased; not only do they recover less promptly, but throughout the entire attack there is constant danger of the heart becoming insufficient. We must, therefore, carefully avoid in the diet all things which from general experience we know are liable to precipitate an attack of gastro-enteritis.

All fried foods should be avoided; the allowance of fruits and many of the vegetables ought to be cut down, not because they themselves are directly injurious, but because of the danger of the patient eating them under any improper conditions. It is a matter of daily observation that patients have attacks of gastro-enteritis that are precipitated by overeating, so that it is well to restrain them. In general, then, in the diet of heart cases the amount of food must be cut down to the last possible degree, not low enough, however, to cause emaciation. Patients should be underfed rather than overfed. The diet should be mixed; it should consist of plain food, and be plainly prepared.

In regard to drink, coffee, tea and all alcoholics ought to be absolutely forbidden. Tobacco should also be forbidden.

Kidney lesions are allied closely to lesions of the heart.

It will be recalled that in the discussion on nephritis it was stated that cases of interstitial nephritis are essentially heart cases; the diet, therefore, for such cases, should be that of heart cases.

For the parenchymatous nephritis the diet must be very different, and here again the essential principle in planning a diet is that of protection. In parenchymatous nephritis the essential changes are in the renal epithelium, and we must endeavor to protect this. The function of the renal epithelium is largely the excretion of the products of the metabolic changes of the albuminoids, and we may protect the renal epithelium by cutting down the amount of these products which must be excreted. The albumins in the dietary must be cut to the lowest limit. It must, however, be understood that if we entirely remove the albumins from the dietary, the patient will starve. It has been shown by Boit that a healthy man resting can live on 85 grams of albumin per day, but this amount has been shown by later experimenters to be greater than is really necessary. A patient with parenchymatous nephritis should not be allowed more than 60 grams of albumin per day. If the edema is marked, or the quantity of albumin in the urine is excessive, this amount can be cut as low as 30 grams. At the same time that we cut down the amount of the albumin, we must correspondingly raise the amount of fats and carbohydrates. A patient with this form of nephritis will receive the proper amount of albumin in about a liter and a half of milk. He will, at the same time, receive about an equal quantity of fats and carbohydrates, so that, in order to maintain nutrition, about 200 grams of carbohydrates must be added. The best diet for this form of nephritis consists mainly of milk with carbohydrates. Unfortunately, many patients can not take milk in sufficient quantities to maintain their nutrition. Milk is often distasteful to them, and in some brings on gastro-intestinal disturbances which cause considerable distress. In such cases the deficiency of milk must be made up by a corresponding amount of other albuminous food. A liter of milk is about equivalent to 150 grams of lean meat, or six eggs, so that the proper amount of meat or eggs may easily be calculated. Such patients become accustomed to milk, so that the daily amount may be gradually increased and the other albuminous foods gradually decreased.

If at any time, while the patient is under treatment, he has an acute exacerbation of nephritis, we must resort to a milk diet exclusively, with a small amount of cereals. Usually it is stated that any of the white meats from young animals or domestic fowls may be used. Leube allows his patients to eat beef, considering the increased amount of extractives, etc. in the red meats not sufficient to injure the kidneys. The objection most authors raise to red meats is that they additionally irritate the kidneys. There is one kind of meat that should be absolutely forbidden, and that is game, because in many cases it has already become putrefied before it is eaten, and we should avoid at all times the introduction into the system of ptomains.

In regard to acute nephritis, practically the same remarks hold for its treatment as for acute exacerbations of parenchymatous nephritis. The diet should consist mainly of milk, with the addition of small amounts of carbohydrates and fats.

In regard to the liver, the chronic and diffuse processes and various forms of cirrhosis, we have to do with a different problem. We have to regulate the diet, not so much for the conditions of the liver as for that of the stomach, and the first stumbling-block which we encounter in laying down a diet is entire absence of any appetite. These patients do not want anything and we have to allow them most anything they will eat. Meat may be allowed in any quantity, but they usually have a special dislike for meat. We would expect, on theoretic grounds, that the carbohydrates ought to be cut off, and certain authors recommend that the carbohydrates be exclusively removed from the dietary of patients with cirrhosis. There are other authors, particularly the French, who are extremely fond of a carbohydrate diet in cases of cirrhosis, recommending a special diet consisting largely of vegetables. Still others recommend a more or less exclusive milk diet as the best. There are certain agents that ought to be avoided in cases of cirrhosis, that is, alcohol, the common peppers, salts, etc. This, briefly, would be the general outline of diet for those three organs.

DIETETICS IN SYPHILIS.

Dr. WILLIAM L. BAUM—The literary fame of Dr. Rabelais has so overshadowed his medical, that it is forgotten that the greatest satirist of his age was one of its greatest physicians and certainly its greatest syphilographer. He was among the earliest to rebel against the cant, which cast the syphilitic out of the value of treatment by reputable physicians and thus rescued this unfortunate from sixteenth-century quacks.

Pointing out the abuse of mercurials, Rabelais in 1532 inaugurated the main principles of what to day constitutes the nonspecific element of constitutional treatment of lues, dietetics and balneology. Thereafter the prevalent treatment of syphilis in the sixteenth century was by two methods: one by sweating in the tub, which survives in our day, and the other by guaiacum in decoction. Both were supplemented by strict diet. Ambrose Paré describes, in the 1575 edition of his work, the tub: "It is rather a cask than a tub. The patient was seated inside on a perforated stool beneath which hot bricks or stones were placed. Through a small trap door in the side of the tub a mixture of vinegar and brandy was thrown upon the heated bricks and the steam was confined by a sheet fastened round the patient's neck. In England the common tub used for salting meat 'powdering' it, as the term then was, seems to have been employed. The humorous allusions to this double use are frequent. In 'Measure for Measure,' the clown, speaking of Mistress Overdone, the bawd, says: 'Troth, sir, she has eaten up all her beef, and she is herself in the tub.'"

In the misanthropic advice of Timon of Athens to Timandra occurs the direction:

> Bring down rose cheeked youth
> To the tub-fast and the diet.

Sometimes an oven, or a hole in the ground, was used for the sweating, and in every case a strict diet was enforced. Dry food, and above all "burnt" or overdone mutton, cut by choice from the rack or neck, was alone to be used.

Beaumont and Fletcher burlesqued Spencer's "Faerie Queen," in their play, "The Knight of the Burning Pestle." A knight and a lady are imprisoned in a cave where they are tortured by a giant. The knight had carried off his "lady dear" from her friends in Turnbull street, a locality notorious for houses of prostitution. He begins:

> I am an errant knight that followed arms
> With spear and shield; and in my tender years
> I stricken was with Cupid's fiery shaft,
> And fell in love with this, my lady dear,
> And stole her from her friends in Turnbull street;
> And bore her up and down from town to town,
> Where we did eat and drink and music hear;
> Till at the length of this unhappy town
> We did arrive and coming to this cave,
> This beast us caught, and put us in a tub
> Where we this two months sweat, and should have done
> Another month if you had not relieved us.
>
> *Woman.*—This bread and water hath our diet been;
> Together with a rib cut from a neck
> Of burned mutton; hard hath been our fare;
> Relieve us from this ugly giant's snare.
>
> *Man.*—This hath been all the food we have receiv'd;
> But only twice a day, for novelty,
> He gave a spoonful of this hearty broth
> To each of us through this same slender quill.
> (Pulls out a syringe.)

In the comedy of "Honest Man's Fortune," by the same authors, published in 1613, occurs this passage:

> All women that on earth do dwell, thou lovest,
> Yet none that understand love thee again,
> But those that love the spital. Get thee home,
> Poor painted butterfly! Thy summer's past;
> Go, sweat and eat dry mutton.

So of a similar gallant in "Middleton's Michaelmas Term," 1607, i, 1:

> He'll be laid shortly;
> Let him gorge venison for a time, our doctors
> Will bring him to dry mutton.

In "Your Five Gallants, Middleton," 1608, i, 1:

"He's in his third sweat by this time, sipping of the doctor's bottle, or picking the ninth part of a rack of mutton dry-roasted, with a leash of nightcaps on his head like the pope's triple crown, and as many pillows crushed to his back."

George Farquhar, in one of his poems, speaks more hopefully to one who has been in the "powdering tub."

> You will revive, the pox expire,
> Then rise like Phœnix from the fire.
> The metal's stronger that's once soldered,
> And beef keeps sweeter once 'tis powdered.

In 1662, Mrs. Aphra Behn, the female novelist, wrote what she termed a letter to a brother of the pen, in tribulation, in which occurs the following passage:

> This holy time, I little thought thy sin
> Deserv'd a tub to do its penance in.
> O! how you'll for th' Egyptian flesh-pots wish,
> When you're half famish'd with your lenten dish,
> Your almonds, currants, biscuits, hard and dry,
> Food that will soul and body mortify;
> Damned penitential drink, that will infuse
> Dull principles into thy grateful muse.

In 1817, the diet here described was revived by Dr. Gandy. He lauded the treatment of syphilis by the dry method, dry food and but little of it. The treatise attracted but little notice, but about thirty years later this method of treatment was tried at the Hotel Dieu of Marseilles, with some success. It was called the Arabic method, as the secret of it had been communicated, so it was said, to the hospital surgeons by an Arab. The diet consisted exclusively of dry biscuits, nuts, dried almonds, figs and raisins. A tisan made from sarsaparilla, China root and cloves, was freely given, and a mercurial pill was administered thrice daily. This diet was employed as late as 1860.

Besides the "tub," another powerful method of securing perspiration in syphilis is that described by D'Avenant's play of "The Wits," published in 1636.

> Though I endured the diet and the flux,
> Lay seven days buried up to the lips like a
> Diseas'd sad Indian, in warm sand, whilst his
> Afflicted female wipes his salt foam off
> With her own hair, feeds him with buds of guacum
> For his salad, and pulp of salsa for
> His bread; I say, all this endur'd, would not
> Concern my face. Nothing can decline that.

If, as indicated by this literature, too much attention wa paid to dietetics formerly, too little is paid to day.

The dietetic therapeutics turns more on the individual case than on any routine adapted to the venereal diseases.

In syphilis we are met with a condition of more or less acute anemia at the onset of the secondary period. It is, therefore, necessary that great attention should be paid to the dietetic as well as to the therapeutic treatment of the patient. There are syphilitic patients in whom the exhibition of hydrargyrum, iodids, etc., is not followed by the customary reaction, and where the specific lesions increase rather than diminish; it is in these that the most brilliant results follow, when a highly nutritious dietary is instituted, even as Lang suggested in his work on the "Pathology and Therapy of Syphilis," to the extent of giving the patient small quantities of wine or liquor. During the treatment of syphilis it is well to add, to the ordinary caution in regard to the use of alcohol, tobacco, acid foods, etc., that the patient should be as much as possible in the air, to insist on a good, nutritious diet, and during the administration of mercurials the taking of large quantities of fluids, milk, and especially water, thus lessening to a considerable degree the dangers of hydrargyrum stomatitis.

DIETETICS: SURGICAL AND GYNECOLOGIC RELATIONS.

Dr. REUBEN PETERSON—In a general way it may be stated that at least 50 per cent. of women coming under the care of the gynecologist present symptoms of derangement of the gastro intestinal tract. Therefore, it behooves those called on to treat the diseases of the female generative organs to have clear-cut ideas of the relations which symptoms referable to the digestive tract bear to the diseased pelvic organs. What authority have we for the statement so often made to the patient, that the digestive disturbance is reflex and will disappear on the restoration of the generative organs to a normal condition? Is there such a condition as "uterine dyspepsia," meaning by this a dyspeptic condition directly related to and called forth by certain diseases of the uterus? If this be the case, the gynecologist's knowledge of dietetics need be of the simplest. For eructations of gas, pain in the epigastrium and heartburn he need only scrape the uterus, sew up the cervix and perform ventrofixation. But if the stomachic and pelvic symptoms are not particularly dependent upon each other, but both are the result of unhygienic surroundings and vicious modes of living, then his knowledge of dietetics must be considerable if he hopes to cure his patients. Nowhere do we find the word "reflex" so abused as in connection with gynecologic troubles. Pains, wherever located, are considered to be of reflex origin and likely to disappear after the cure of the local disease. The patients are led to believe that an immediate restoration of health will follow the repair of a cervical tear or the stitching up of a torn perineum. This is far from the truth. The immediate improvement after the operation in the majority of cases is usually due to the rest in bed, which has acted like a tonic to the overexcited and too often overworked nerve-centers. The operator's work has only begun after the completion

of the operation. In certain cases, the longer he can persuade the patient to remain in bed the better; then will his knowledge of dietetics, in the broad sense of the word, come into play. The operation has removed a certain source of irritation which would have rendered futile any attempts at cure through a systematic dietary. Now, the exhausted nerve cells and tissues can be nourished and restoration to health be looked for. This is not a question of weeks, but of months. It is the wise operator who forestalls the patient's disappointment and criticism, and tells her prior to the operation that a constitution weakened for years can not be restored to health in as many weeks by operative interference.

And now let us consider briefly four classes of patients whom the gynecologist is most frequently called upon to consider, outside of distinct disease of the pelvic organs:

1. By far the most numerous class is composed of the women who are sufferers from non-elimination. In my experience they are usually thin, with sluggish complexions. They are apathetic and "just too tired out to live." They arise unrefreshed by a night's sleep, with a dull ache in the back. They have pains in every part and every organ of the body—headache, neckache, chestache; aches everywhere there are nerves. We find the majority of these women great meat eaters. The fluids ingested consist of a little tea or coffee. They will confess to you that they have not drank a glass of water for months. Examination of the urine shows the twenty four-hour amount to be very low, with a corresponding low specific gravity, showing the amount of solid excreted to be very small.

These patients have perhaps sought medical advice for a persistent and profuse leucorrhea which, together with bronchial secretion and persistent diarrhea, is nature's method of calling on other organs to perform the eliminative duties of the only partially working kidneys. The treatment will consist in diminishing the daily amount of nitrogenous food. Meat should only be allowed once a day, and sparingly. The patient should be encouraged to drink large quantities of water in order that the kidneys may be flushed out. A tablet of effervescing citrate of lithia in a glass of water may sometimes be advantageously employed, as I have found it much easier to induce the patients to drink the water if they think that medicine is being used. Under this treatment a hitherto intractable leucorrhea will be found to disappear. The pains in the ovaries, which were simply neuralgic in character, due to the presence of the uneliminated products, will disappear with the neuralgic pains in other parts of the body.

The next class of patients with which the gynecologist has to deal consists of women who eat too little, and whose nerve cells are thereby impoverished. These women are thin and anemic, and their muscles flabby. The digestive disturbances arising from the general anemia are thought to be dyspeptic, and the patient abstains from one article of food after another, thinking that it disagrees with her. The starved nerve cells cry out against such treatment, and the digestive disturbance is increased. It is of the utmost importance that the physician recognize the true state of affairs, and institute the proper treatment. The amenorrhea is from general, not local, causes, and a more liberal diet and iron should take the place of local treatment. Especially should operations on the genitalia be avoided until the general system has regained its tone. The shock of the operation in the patient's weakened condition will do more harm than good.

The third type is distinctly different. The patients are rosy-complexioned and stout. They have good appetites, are good livers, and are inclined to stoutness. They usually apply to the gynecologist because of a gradual diminution in the amount of the menstrual fluid. Where they used to flow three or four days, they now flow but one, and barely stain a napkin. They may apply for the cure of sterility, either absolute or relative. The treatment of these cases should obviously consist of depletion and a lessening of the total amount of solids consumed. The loss of ten or fifteen pounds in weight will often prove of much value, although the sterility is apt to persist.

The fourth class are those suffering from chronic constipation. I do not believe with some that the mere pressure of a loaded rectum on the appendages will produce disease of these organs. Pelvic congestion may result from the pressure of the fecal mass on the pelvic veins, and this may aid in the production of disease of the uterus and appendages. I believe that the evil effects of constipation lie in the autointoxication produced. Before the hardening of the fecal mass certain substances are absorbed through the bowel, and a species of poisoning results. I have not been very successful in curing constipation by regulating the patient's diet. I have faithfully tried many times, and have succeeded in but few. It is extremely difficult to regulate the patient's daily life, so hampered is she by social and household duties. Still, although a daily evacuation of the bowels may not result without the use of mild laxatives, the lower bowel can be kept cleared and intoxication through fecal absorption can be prevented.

Surgical Relations.—Two or three days prior to operation may profitably be spent in regulating the patient's diet. When either this has been neglected or the case is an emergency, the patient may suffer not only from nausea and vomiting after the operation, but the result may be serious when the intestinal tract is filled with masses of undigested food. The anesthetic and the shock of the operation are liable to produce paralysis or paresis of the intestine, and absorption is made easy through the absence of normal peristalsis.

After the bowels have been thoroughly evacuated, only easily digested foods, like milk, broths, eggs, etc., should be given until the operation. An examination of the urine will be a good index to the way in which the waste products are being eliminated. If the kidneys have not been active, they should be made so by the proper treatment, which has been hinted at in the preceding remarks.

The post-operative dietary will vary according to the nature of the operation. It has become almost an established rule in abdominal surgery that practically nothing shall be taken into the stomach for the first twenty four hours, excepting occasional sips of hot water. Even liquid food given before the expiration of this period is apt to be vomited, and the irritability of the stomach thus set up may last several days. Yet this rule has not a few exceptions. It is obviously folly to withhold nourishment from one who is suffering from inanition, just as it is unwise not to administer liquids to very anemic patients. Under these circumstances I often administer considerable quantities of liquid nourishment in the form of hot milk and lime-water, as soon as the patient is over the anesthetic.

Intense post operative thirst may be controlled by rectal injections of hot water. I leave orders for a pint of hot water to be administered by the rectum every hour as long as the patient is able to retain them. Excessive loss of blood and surgical shock are treated in the same manner, aided by the subcutaneous injection of salt solution. After simpler operations I do not insist on the twenty-four-hour rule, but if the patient asks for it, milk and lime-water is administered after the first twelve hours. It is exceedingly rare to find a patient who is unable to retain milk and lime-water, I mean with whom milk does not agree. Patients may have considered milk a poison to their systems prior to the operation, yet after the operation they take it and digest it perfectly. Milk is the surgeon's mainstay as a post operative nourishment. I do not find that beef tea, broths, etc., are good substitutes. Small amounts of equal parts of milk and lime-water should be administered every half hour for a while. Then, if it be well borne, the amount can be increased and the intervals lengthened. Ice should not be administered for thirst. It does not quench the latter, and each administration calls for more and more, until so much fluid is in the stomach that vomiting is produced. In the presence of post-operative vomiting give nothing by mouth, either medicine or food. Persistent vomiting, with yellowish or green vomitus usually yields to lavage. After the bowels have been moved on the second or third day, the diet usually can be increased. If salts or calomel be employed in divided doses as cathartics, omit the liquid nourishment during their administration, else vomiting may result. Meat should only be allowed after the first week, and then but sparingly. Especially is this the case after abdominal or bowel operations, where the ingestion of meat is not infrequently followed by a rise of temperature.

(*To be continued.*)

Chicago Ophthalmological and Otological Society.

Regular Meeting, Held May 9, 1899.

BLOOD EXUDATE IN CORNEA.

DR. F. C. HOTZ, in reporting this case, said: The patient I have to present to-night shows a condition of the eye which is certainly rare. The gentleman came to my office on April 26. His eyesight has been poor since childhood, at which time he had smallpox, and inflammation of the eye following that, which left the corneæ in a more or less hazy condition. His eyes have never troubled him otherwise: he has never had any recurrent inflammation. He was connected with the army in Germany and did his work without any trouble, and said his eyes were all right two weeks before he consulted me. One day he felt a smarting sensation in the left eye; the eye became very red for a day or two, but not until four or six days afterward did his wife notice a dark spot covering the center

of the cornea and gradually getting larger. The redness subsided; he had no pain, and when he came to me there was absolutely no redness about the eye. Tension was perhaps a little below the normal standard; there was a large, almost circular disc in the cornea, of a deep purplish color with a bright blood-red margin. Focal illumination showed that the corneal epithelium was hazy, but no blood-vessels could be found in the corneal tissue, even by the magnifying lens. The pupil could not be seen at the time, and the sight was just perception to light. By means of atropin, the pupil was dilated, so that the margins became visible and I could plainly see the anterior chamber was perfectly free and clear, and the ophthalmoscope yielded a bright red reflex from the fundus, showing that there was no disturbance in the vitreous, and the sight improved to counting fingers easily. It is now two weeks since I saw the patient; in the course of this time the central infiltration in the cornea has changed from a purple to a brown chocolate color; still, even yesterday morning I could see along the lower margin a few bright red spots. Close inquiry of the patient shows he has received no injury in his work or otherwise. The eye has not been hit by any foreign body, bruised, nor injured in any way.

This case differs somewhat from those heretofore reported in literature, in that the cases which have been reported, except a few, have a history of traumatism preceding the trouble, and there was effusion of blood into the anterior chamber, from which it is thought the coloring matter was taken up into the corneal tissue by diffusion through Descemet's membrane; and microscopic examination showed accumulations of hematoidin crystals in the cornea.

Trescher Collins of London has reported nine cases of his own in three years, and believes the trouble is not so rare as is generally considered; but that must have been an extremely fortunate coincidence. I am sure that these cases are so interesting that they would have been reported more frequently in our journals if the condition was more frequently observed. This is the first case I have seen in my practice. In Collins' cases, seven had injuries, with blood accumulations in the anterior chamber. One was a case of recurrent inflammation, most likely a cyclitis, and spontaneous hemorrhage occurred in the anterior chamber. The other was one of extraction of cataract. In these cases a degeneration evidently occurred in the eye, which might favor a spontaneous hemorrhage. But in our case, we have to deal with an eye which to all appearances is in good condition, there being nothing wrong except a hazy cornea from keratitis in infancy. As there is no history of traumatism in this case, it is difficult for me to understand where the blood came from.

Dr. W. F. COLEMAN—I do not remember ever having seen a case resembling the one reported by Dr. Hotz, and the question arises: Where did this blood exudate come from? I have tried, in old opacities of the cornea, galvanism, one millimeter in strength, the positive pole being applied to the cornea, and have obtained such encouraging results that I would be disposed to try electricity in this case.

Dr. HOTZ—I am sorry, when I first saw the case two weeks ago, that I did not tap the cornea to get some of the reddish stuff for microscopic examination as to whether there were any blood corpuscles to be found, because in all cases that have been reported the examination showed that there were no blood-corpuscles. They simply found hematoidin crystals scattered through the tissues of the cornea, but no corpuscles; therefore, the conclusion was reached that it was the coloring part of the blood which transuded from the blood collection in the anterior chamber and into the corneal tissue, not a hemorrhage directly into the corneal tissue. I feel inclined to believe that in this case the microscopic examination would probably yield the same results. I can not conceive in any way how blood should directly get into the corneal tissue, when there is no parenchymatous vascularization. The strange feature connected with the case is how the hemorrhage occurred. Undoubtedly, it was originally a hemorrhage into the anterior chamber; it must have been a spontaneous hemorrhage, because according to the history there was no traumatism, and in reviewing my experience I do not remember any case of an eye in as good and sound a condition that had a spontaneous hemorrhage. I have seen hemorrhages occur in degenerated eyes after cyclitis, or internal diseases of any kind, and in cases of hemorrhagic glaucoma.

As to treatment, practically I have done nothing. I have kept the case under observation and the pupil dilated with a little atropin. I shall be glad to learn of something that will promote the absorption of these blood-stains. The outlook is not very encouraging for the patient if it will take fully two and a half years before these blood-stains disappear. Collins reported a case in which it took that length of time for the blood stains to disappear.

(To be continued.)

Cincinnati Academy of Medicine.

Meeting Held June 5, 1899.

CASE OF CYSTINURIA.

Dr. LEONARD FREEMAN, the guest of the evening, reported a case in a girl about 15 years of age, in whom the symptoms had been present about ten years; these symptoms, while not severe enough to be dignified as renal colic, were, however, definitely referable to the region of the kidney. Soon following the examination of the urine, the girl met with an accident, falling from the top of a flight of stairs to the bottom. All her symptoms immediately disappeared, also the cystin crystals from the urine, not to return again. He was unable to account for this sudden cure unless there had been a stone lodged in the pelvis of the kidney, which stone had had its position changed by the fall. He reported this on account of its rarity. The crystals were demonstrated under the microscope.

Dr. ALBERT FREIBERG spoke of a case of urinary stone composed of cystin which had been removed by Dr. Ransohoff. This patient, a young man, also had cystinuria.

RANDOM OBSERVATIONS.

Dr. F. O. MARSH, in a paper on this subject, spoke of some experiments he had performed to illustrate the variations in surface temperature as produced by inflammation. The theory of evolution of heat was touched on. He does not think that increase of temperature during inflammation can be entirely accounted for on the theory of increased blood supply; for in addition there was an increased amount of blood taken from the part and the radiation of heat was greater.

DILATATION OF HEART COMPLICATING OBSTRUCTIVE LESIONS OF UPPER AIR-PASSAGES.

Dr. JOHN A. THOMPSON reported a number of cases of cardiac dilatation, some with and some without murmurs, in whom there had also existed disease of the nose, particularly hypertrophic rhinitis and nasal spur. Removal of the obstruction had in every case relieved the cardiac symptoms if not entirely removed them.

Wayne County Medical Society.

Regular Meeting, held May 25, 1899.

PROGRESSIVE MUSCULAR ATROPHY.

Dr. C. C. YEMANS, Ypsilanti, Mich., presented two male patients. They had been afflicted for more than a year, and presented the clinic aspect of the advanced stage of the disease. One of the patients performed the act of respiration almost entirely by the diaphragm, his chest expansion being only half an inch. The treatment that the Doctor was carrying out in both cases was the same, viz., daily baths in the mineral waters of Ypsilanti Sanitarium, with massage and the application of static electricity. No other therapeutic measures were used. One of the patients had been under treatment for about three months. He stated to the society that he had so far improved as to be able now to dress and undress himself; whereas, when he had entered the sanitarium he was almost helpless. The other patient had been treated for two weeks only, but declared that he had improved in muscular power.

Dr. EMIL AMBERG, chairman of a committee appointed to consider what should be the duty of the society respecting proprietary medicines, read the report of the committee, which discountenanced the prescribing of such pharmaceutic preparations as were secret, either as to the ingredients or their quantities, and objected to none of those whose complete formulæ were known, where such preparations had been found, by actual prescribing, to produce the effects claimed for them respectively. The report was adopted.

According to the Jour. des Sci. Med. de Lille, a French life insurance company recently refused to pay the premium on the death of one of its policy-holders, claiming that he had dissimulated and concealed the existence of a serious disease. A Paris court summoned the attending physician who affirmed that he had in fact treated the deceased for quite a serious condition, the existence of which had not been revealed to the company. But the supreme court decided that such a violation of the principles of professional secrecy could not serve as the foundation for a judicial decision, and the suit was decided against the company.

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SATURDAY, JUNE 17, 1899.

PRESENT STATUS OF OUR KNOWLEDGE OF FATTY DEGENERATION.

In a critic summary of the question of fatty degeneration, A. E. TAYLOR[1] points out that there has been a great deal written about fatty degeneration and very little work done. The current pathologic teaching is that in fatty degeneration the proteids of the diseased cells become converted into fats. The very significance of the word "degeneration," as contrasted with infiltration, seems to imply this idea as to the origin of the fat.

After a careful review of the original work bearing on this problem, TAYLOR reaches the conclusions that the origin of fats from proteids under physiologic or pathologic conditions has not been demonstrated, the weight of the evidence being in favor of regarding the so-called fatty degeneration as an infiltration of fat formed from carbohydrates. This position, he says, is provisional only, and future work must confirm or reverse the above conclusions.

Simultaneously with TAYLOR'S review there appears a study of pathologic fat formation from ZIEGLER'S laboratory, by W. LINDEMANN,[2] from which the following is gleaned. For the purpose of a preliminary discussion of the subject on a little different basis than would be afforded by the use of the old terms, "degeneration" and "infiltration," which at the same time as they are likely to carry with them many preconceived notions are also variously defined by the authors of recent works on pathology, LINDEMANN divides the field before him into physiologic lipogeneses.

Physiologic lipogenesis is above all things marked by the absence of any deep-seated disturbance of the functions and real structure of the cell involved, which always remains visible; physiologic lipogenesis generally occurs at the expense of imported material although it seems not improbable that in the secretion of milk the cell protoplasm is drawn upon.

In degenerative lipogenesis, on the other hand, the fat is regarded as formed from the constituents of the cell which suffers severe protoplasmic and nuclear lesions. LINDEMANN presupposes that fat can form from albumin, but with full consciousness of the fact that PFLÜGER, ROSENFELD and others hold, as set forth in TAYLOR'S review, that this is not demonstrated. LINDEMANN lays stress in this connection on the formation of fats from proteids by bacteria, as is supposed to occur in the formation of adipocere, and which therefore might occur in infections, and the post-mortem development of fat in aseptically conserved tissues and organs described by a number of writers, as HAUSER, LUBARSCH and others, and demonstrated to occur in the epithelial cells of the skin of dead bodies, by LINDEMANN himself.

In the future discussion of the process of intracellular fat formation, LINDEMANN states that while it is very likely that fat is formed from proteids, yet it is not definitely proven. Granting the probable existence of a true degenerative lipogenesis in which the fat is formed from the cell protoplasm, does the morphologic study of suitable material throw any light upon this question?

For a time much stress was laid on the size of the fat drops, fatty degeneration being considered as marked by the presence of fine droplets of fat in the cell. This difference in the size has, however, been found insufficient as a distinguishing characteristic. In conditions of so-called fatty infiltration proper there are usually to be found more or less well-marked nuclear changes. When 0.5 to 1.0 of oleum pulegii is injected into a rabbit the movements become atactic; and the animal will remain for a long time in unnatural positions; there is marked mydriasis and death occurs in twelve to fourteen hours. After death there are found fatty degeneration of the parenchymatous organs and other changes such as ulcerative enteritis, etc. The microscopic examination shows characteristic changes, especially in the kidney, the protoplasm of the cortical epithelial cells being filled with fine dust-like fat granules, the nuclei smaller than normal, deeply stained, angular, and they lie near the cell wall. In more chronic intoxication fragmentation of the chromatin often occurs.

In concluding, LINDEMANN states that the formation of fat under normal and pathologic conditions takes place in various ways widely different from each other and is associated with very different histologic changes. It would therefore seem that the efforts to trace all forms of fat production to the deposition of

[1] Am. Jour. of Med. Sci., 1899, p. 569; Journal, June 3, '96, p. 1248.
[2] Ziegler's Beiträge, 1899, 25, p. 392.

transported fat only must be considered as unsuccessful. A definite settlement of the question can only be hoped from a chemic investigation of fat—long ago indicated by VIRCHOW—especially of that formed in association with degenerative changes and in the breast. It would seem very probable that the fat formed from albumin—or under conditions that point in that direction—will be found to have distinct peculiarities. At any rate interesting facts might thus be obtained. The post-mortem development of fat has not been sufficiently studied, although this phenomenon is strong presumptive evidence in favor of the theory of the origin of fat from proteid. He finds that on the whole the old doctrine of fatty degeneration still stands.

As pointed out by TAYLOR, in his critic review, even though we concede that fat is formed within the degenerated cells, it can still be urged that it is produced from the carbonous compounds, sugar, glycogen, glucosids, and mucin, which abound in cells, rather than from the proteids—a contingency which LINDEMANN does not lay enough weight on.

This fragmentary reference to some of the knotty problems in connection with fatty degeneration will serve to indicate that this process is by no means as simple as usually taught in the medical colleges and text-books, and that when the phrase "fatty degeneration" is used, as it will be, it should perhaps be rather in the sense of cell degeneration with the formation of fat than cell degeneration directly into fat.

PART PLAYED BY URINE AND FECES IN SPREAD OF TYPHOID FEVER.[1]

While it is true that the profession and many of the laity are well-aware that the dejecta from typhoid fever patients are the cause of the dissemination of this modern scourge, many of those who are well acquainted with this fact steadily ignore it in the practice of preventive medicine. The laity are to a certain extent justified in this carelessness by reason of the fact that physicians very often fail to insist on the proper disinfection of the discharges of the patient, and physicians of experience are constantly meeting with instances in which carelessness concerning the readiness with which the disease is communicated results in illness and death.

In this connection, an interesting paper has recently been published by HORTON-SMITH of St. Bartholomew's Hospital, in which he gives the details of some interesting researches made by him as to the period at which typhoid bacilli appear in the stools of patients suffering from this disease, and others in which he deals with the same question in relation to the appearance of these micro-organisms in the urine.

While the feces are the most common carriers of the infection, it is not to be forgotten that the bacillus of EBERTH only appears in these discharges, as a rule, during a certain period of the disease, and that many of the researches which have heretofore been published, which apparently have shown the presence of typhoid bacilli in the stools throughout the whole malady, were based on insufficient bacteriologic knowledge and failed to differentiate between the colon bacillus and the specific organisms which we are considering.

HORTON-SMITH finds that the stools of a typhoid patient, if carefully separated from the urine so that they are not contaminated by that secretion, contain typhoid bacilli in fair quantities up to about the beginning of the third week, but that after this date the number diminishes rapidly, except if a relapse occurs, when they are again to be found in the feces, although they cannot be found during convalescence. In other words, the stools of a typhoid fever patient are to be regarded as highly infectious during the early stages of the disease and during a relapse, but this infectiousness speedily diminishes with the progress of the malady. So thoroughly is HORTON-SMITH convinced of this that he believes all those cases in which typhoid bacilli have been found in the stools late in the disease due to the contamination of the feces by urine laden with bacilli.

Curiously enough the researches which have been made on the bacteriology of the urine in typhoid fever, seem to have been made by men who have been better acquainted with the necessity of distinguishing between the colon bacillus and that of EBERTH, probably because most of them have been undertaken since we have known more about the necessity of their differentation.

In these studies, much has been done by RICHARDSON of Boston, and HORTON-SMITH has made useful addition to our knowledge concerning this question, as has also BLUMER. As a matter of fact it would appear that the urine is not always laden with micro-organisms; thus out of sixty cases, positive results were obtained in only fifteen and negative results in forty-five. In other words, typhoid bacilli have been observed at some period of the disease in the urine in 25 per cent. of cases. Curiously enough the appearance of the micro-organism in the urine as to time, is the reverse of its appearance in the feces, for while, as we have already stated, it appears in the feces during the first three weeks, in largest numbers, it appears in the urine very much later, varying from the fifteenth to the thirty-ninth day, and has not been observed in any case prior to the fifteenth. One instance has been reported in which the bacillus was in the urine seventy days after the beginning of the malady.

The bacillus of EBERTH, when it occurs in the urine, is nearly always in pure culture, and when it is present in such numbers as to cause turbidity of the urine, is capable of producing most wide-spread

[1] See JOURNAL, June 10, p. 1309.

infection. Indeed, it has been suggested by HORTON-SMITH that the great Caterham outbreak of tyhoid fever in 1879 was in reality due to contamination by the urine of a typhoid fever patient rather than to his feces, for it is not to be forgotten that PETRUSCHKY has estimated that as many as 172,000,000 typhoid bacilli may be found in such cases in a single cubic centimeter of urine. A small amount of urine, therefore, is capable of contaminating an immense quantity of food or drink.

THE COLUMBUS MEETING.

The meeting of the AMERICAN MEDICAL ASSOCIATION held at Columbus last week was one of the most successful ever held. This success displayed itself in the number registered, the number attending the Sections, the long list of excellent papers read and discussed, and the good feeling which prevailed. The number registered was as follows: Monday, 291; Tuesday, 1046; Wednesday, 290; Thursday, 72; Friday, 38; or a total of 1737. This is the second largest number registered at one meeting, the exception being the semicentennial meeting at Philadelphia. Last year at Denver there were 1535 registered; the year previous, 1897, at Philadelphia, 1983; and the year 1896, at Atlanta, there were 634. It was the universal opinion that the Sections were never better attended, and the scientific work done in practically every Section is remarkable in respect to both quality and quantity. Promptness in calling to order, economy in the use of time in the discussions, and a feeling of we-are-here-for-business-and-mean-business seemed to prevail at each Section. Consequently, while the program contained a superabundance of papers, not a few of the Sections completed their work before adjourning. In spite of the fact that the number in attendance was about all that Columbus could well accommodate, goodfellowship feeling was just as evident as it was at Denver a year ago, where good nature bubbled up continuously. If the hotels had been larger it would have been more pleasant, probably, but a little thing like being crowded did not dampen the good spirit which prevailed. The Columbus and Ohio physicians did nobly, and the ASSOCIATION will be glad to accept another invitation some time, especially if they will put up another hotel or two, and guarantee a little cooler weather.

INDIANA PATHOLOGIC EXHIBIT.

An innovation was made at the recent meeting at Columbus which deserves mention and encouragement. We refer to the pathologic exhibit made by the Indiana State Medical Society, in which was shown over 700 specimens which had been contributed during the past year by the members of the society. The unique departure made is both practical and instructive, and if it could be adopted by other State societies they would be doing much good for the present and the future. The AMERICAN MEDICAL ASSOCIATION did well in adopting a resolution endorsing the work done by the Indiana State Medical Society (see p. 1375), and we hope to see the example set followed by other like bodies in future meetings.

CRIMINAL CARELESSNESS.

An idiotic performance of an undertaker in South Chicago last week calls for comment. A child died of diphtheria and, contrary to all good sanitary regulations of the day, was given a public funeral. According to the report the undertaker opened the coffin to allow, or, as is said, actually invited those present to kiss the corpse. Several persons did so and it is also stated that several cases of diphtheria have appeared in the neighborhood since the occurrence and it is feared more will follow. We are glad to know that action has been taken by the authorities and the man has been fined $200—the maximum penalty of the law.

THE TREATMENT OF DIABETIC COMA.

Our knowledge of conditions attended with glycosuria has been much extended of late years through the observations, clinic and experimental, of a number of industrious investigators. As a result, the detection of sugar in the urine in any given case no longer causes the alarm and gives rise to the sense of hopelessness and the gloomy prognosis that were the rule in the past. It is recognized that glycosuria may be of various grades of intensity, and that diabetes may be mild or severe. The most serious complication of these metabolic disturbances is the intoxication that is directly the most common cause of death and that manifests itself clinically in the form of various nervous disturbances, and finally as coma. It has been thought that this condition is dependent on the presence in the blood of certain acids, and more particularly diacetic and β-oxybutyric acids, and it has been suggested that the most logical treatment consists in the administration of alkalies—by the mouth, through the bowel, beneath the skin or into the veins. It is true that the results of this therapeutic procedure have not been entirely successful, in fact may be considered as rather discouraging; but, as is pointed out by HERZOG,[1] treatment often is instituted too late and after coma has developed (perhaps with structural alterations), and it is not repeated with sufficient frequency. For these reasons especial attention should be directed to the reaction of the urine of the diabetic and on the first appearance of suspicious symptoms or of those indicative of intoxication, or of undue acidity of the secretion of the kidneys, an effort should be made to render this alkaline. To this end from 3 to 5 per cent. of sodium bicarbonate in a 0.6 or 0.7 per cent. solution of sodium chlorid may be injected beneath the skin, while alkalies may be administered by the mouth and alkaline solutions be injected into the rectum. The treatment should be persisted in for some time after dangerous manifestations have subsided.

[1] Berliner Klin. Woch., April 3, 1899, p. 205.

THE PLAGUE AND THE DOCTORS.

According to Mr. JULIAN RALPH, one of the worst dangers to civilization from the present plague epidemic is that almost every doctor who has had plague patients insists on carrying away plague germs for the purpose of study. In this way, he claims, these germs are exported from the plague foci to every corner of Christendom by medical men and students who have gone to India, first from Japan and since from every part of Europe and America, to study the epidemic. As this is published in a popular illustrated weekly of wide circulation, it is possible that it may at least cause some uneasiness in the public mind, which is just now in a very receptive state as regards hints and theories of sanitation and disease. The occurrence of a couple of deaths in a Vienna laboratory of research, from escape of plague germs, is also an object-lesson that seems to fortify Mr. RALPH'S position and to show that there exists a real danger of the extension of the disease in temperate climates and among European races. Still another fact, that it is reported as having appeared in Egypt, may also add weight to his view. On the other hand, however, we know that the plague has not appeared in Europe as an epidemic since the most elementary knowledge of sanitation has existed, that it has been controlled in many parts of India under more or less unfavorable conditions, and that there is no instance on record of the extension of the disease from any medical investigation of its germs. The Vienna incident was due to lack of precautions that is not likely to occur again or elsewhere, and the disease was confined to the two first infected individuals. There is no doubt that the plague, if invited and its way prepared by the establishment of conditions that once existed, might be the devastating scourge that it formerly was, but the sanitarians of civilization are not doing that sort of thing. While eternal vigilance is the price of public health as well as of liberty, it does not appear that there will be any justification for any undue fears or panic on this account. If doctors or students are negligent or careless, it is safe to say that they will be their own only victims. Nothing short of malicious mischief is likely to introduce the pest otherwise than through the ordinary channels of neglected general precautions, such as quarantine inspection of infected immigrants, etc., and the danger from this source in temperate Europe and America is not excessive.

LEGALITY OF "CHRISTIAN SCIENCE" HEALING.

It is said that able lawyers have expressed opinions that an indictment will not stand against "Christian Science" healers when their victims are adult adherents of that hybrid religiomedical delusion. They are not constrained, they claim, nor even persuaded, to use "Christian Science" methods, but do this of their own free choice and in obedience to their convictions. If a person chooses, say the upholders of this view, to rely entirely on prayer, he may be admittedly foolish, but the charge of murder or manslaughter can not be sustained against those he called in to aid in his voluntary act. This is a new view of the case—aiders and abettors of a suicide have not been held guiltless by the criminal law anywhere so far as known, and in New York State, where the issue is made at present, attempts at suicide are themselves a punishable offense, if we are not mistaken. If MRS BARGUET (see JOURNAL, May 20, p. 1135), for whose death the "Christian Science" healer is held accountable, was an obstinate believer in the power of faith, and as firm a disbeliever in that of medicine, does it really excuse those who actively abetted her in her obstinacy or did their best to encourage it? Very few invalids are fit to direct their own treatment in serious illness, certainly not in the late stages; they are to a certain extent irresponsible and incapable of managing matters for their own best welfare. Physicians, who should be the best authorities, seldom attempt to dictate their own medical treatment when really ill, but put themselves unquestioningly into the hands of some brother physician who takes the responsibility of the case. The attendant practitioner, whether physician or "Christian scientist," is therefore the responsible party, and this, it would seem, ought to be the legal view of the case. The difference between an adult and a child is therefore nearly *nil* in severe sickness; both are alike irresponsible and helpless. There is nothing to be said against a devout trust in prayer, recognizing also the truth that "God helps those that help themselves," but there is a vast difference between the "fervent prayer of a righteous man that availeth much," and the mercenary precations and other mummeries for gain of the faith healer and the "Christian Scientist."

STATE QUARANTINES.

It is difficult for those at a distance to appreciate the feelings of those who believe themselves in danger of the yellow-fever scourge, and hence any harsh judgment of the apparently unreasonable measures sometimes taken is uncalled for. From an economic point of view, however, the consequences of the rigid impromptu quarantine measures might, it would seem, be often serious, and the question arises, would not a more efficient sanitation and general preparedness for the emergencies be a better way of meeting the disease than those at present followed? If Havana can be kept free from yellow fever, is it irrational to suppose that our southern cities can be as well if not better defended? The country that is prepared for war escapes it or does not dread it; it is to the one that is unprepared that wars are most expensive and most disastrous. So with disease, thorough local sanitary measures are often far better preventives than a panicky shotgun quarantine or even a rigid border inspection, and are in the long run far less expensive, when we take into account the business interruption that the latter involves. One point in connection with these State or local quarantines has arisen recently, that it would seem might possibly

lead to serious complications; that is the interference with the mail. It emphasizes the necessity of a more general supervision of health matters in this country, a national rather than a mere local authority in such matters as interstate quarantine, as well as those of possible foreign germ introduction. A local health officer ought not to be in a position where in the presumed exercise of his duty he comes in conflict with Federal law, and it might also be of advantage to have the control of such matters out of the hands of any one who might possibly take too local or narrow a view of the requirements of the situation. Let us have a national department of health.

"THE SCIENTIFIC MOTIVE."

The unselfishness of the work done by members of the medical profession is sometimes recognized, and when it is it should be an encouragement to go on in the grand work and continue to keep commercialism outside and separate from medicine. The *Chicago Tribune* of June 14 has an editorial entitled "The Scientific Motive," based on the article in the June *Harper's Monthly*, by Dr. H. S. WILLIAMS, on the progress of medicine during the century, on which we commented two weeks ago.[1] After referring to the work done, the *Tribune* says:

There naturally comes to one in going over this remarkable recital the reflection—though it does not seem to have occurred to the author—that these discoveries were made without the stimulus of "letters patent" or the hope of any "exclusive rights" in their results. Indeed, nothing could be farther from the sentiments of the profession than such an idea. When the medical profession makes a great discovery it becomes at once the free possession of all, both for use and for further improvement.

This fact is interesting in connection with the confidence of certain thoughtful persons that the scientific motive is destined to be the great moralizing agent in the world. They point to the fact that many a scientist of to-day is absolutely careless of all other considerations, except the chance to pursue his work under favorable circumstances, and as regards those scientists—of whom there assuredly are some—who still give evidence of responding to the money-making spell, they are pointed to as exemplifying a transition stage—as responding to the new motive though not entirely freed from the old.

The scientific spirit as a means of impelling men to strenuous effort and expelling more common ambitions, not only opens up glowing fields to the imagination, but certainly has something more than imaginary fruits to show in the century's history of medicine.

RAPID CURE FOR APPENDICITIS.

There seems to be nothing too absurd for quacks to claim, papers to print, or fools to believe. The latest is published in a Chicago paper of June 12, and is telegraphed from New York, with other important news. It seems passing strange that a reputable journal would publish such absurd rubbish even for the sake of creating a sensation. The query which naturally arises is whether the osteopath in question is such an ignoramus as not to know the absurdity of the "rot," or whether he thinks that there are people who are such fools as to believe it, and thus help him to reap a harvest. If the latter, he will probably not be disappointed. Following is the clipping:

> One of the most unusual operations yet recorded in surgery was performed recently on a young woman in this city, by which was effected the cure of a case of appendicitis. No knife was used, no medicine, no poultices, no ice packs—none of the usual methods of physicians and surgeons to treat this most serious of ailments. So simple was the method employed that only eight minutes elapsed from the time the physician reached the patient until he had completed his work, and as he believes, successfully. . . . "The method of treatment is the one used by all osteopathists and has been in use by them for some time."
>
> To demonstrate, the doctor placed the thumb of the reporter's left hand flatly in the palm of his right hand. Then he slapped the palm of the hand smartly against the broad of the thumb.
>
> "The hand represents the psoas muscle," he said, "and the thumb the appendix. We produce a spasmodic contraction of the psoas magnus, like the slapping of the palm of the hand against the thumb. This forces the foreign substance from the appendix, and relief follows immediately."
>
> Just back of the appendix is the largest muscle in the human body, known as the psoas magnus. It is attached to the femur or big bone of the leg, and is the muscle by which one can revolve the leg as on a pivot at the heel. It is this muscle which is made to do the trick of emptying the appendix. Using the fingers of one hand to hold the walls of the abdomen in place and to prevent a rupture of the delicate internal structures, with the other hand a spasmodic contraction of the psoas magnus is brought about, which snaps it against the appendix, and is said to force out of that organ whatever of foreign substances it may contain.

Medical News.

A GIFT of $12,500 has been made to Provident Hospital, Chicago, by Nathan Freer.

PURE FRESH milk is to be sold at 4 cents a quart, and sterilized milk at 1 cent per bottle, to the sick of Philadelphia.

THE PROFESSOR of hygiene, Konigsberg, Erwin v. Esmarch, has accepted a call to Göttingen in the same capacity.

THE DEATH of Lawson Tait of Birmingham, Eng., in his 51st year, occurred June 13. A further notice will be given later.

COMMENCEMENT exercises at the University of Pennsylvania were held June 14. The number receiving the degree of M.D. was 211.

A FIRE in the laboratory of the University of Maryland, Baltimore, on the night of June 6, damaged the building and apparatus seriously.

THE HOSPICE of La Rochelle has recently been endowed with $20,000 for the construction of a home for convalescents discharged from the hospitals but not strong enough to work.

[1] See JOURNAL, June 3, p. 1263.

DR. W. W. KEEN, president of the AMERICAN MEDICAL ASSOCIATION, sailed for Europe, June 16, to return late in September.

PROF. SIMON NEWCOMB of Johns Hopkins University, received the degree of doctor of civil law at Oxford University, England, recently.

THE RUSSIAN Government has appropriated three million roubles ($1,650,000) for the improvement of the mineral springs and other resorts in the Caucasus.

A BOARD of health has been appointed at Carlisle, Pa., consisting of Drs. J. C. Groome, J. M. Goodyear, C. D. Marquette, Reuben Seiler and Leroy Merriman.

THE Berlin Medical club invites physicians passing through the city to "honor it with a call." A monthly card is issued to visiting physicians contemplating a longer stay.

GROUND has been broken in Atlantic City, N. J., for the establishment of a new annex to the City Hospital, the result of a gift of $6,000 by Miss Elizabeth Boice of Absecon, N. J.

PROFESSOR MINKOWSKI of Strasburg is mentioned as the probable successor of Knoll at Prague. He has already made quite a name by his works on the pathology of diabetes, etc.

A STATUE of Dr. Benjamin Franklin, one of the founders of the University of Pennsylvania, was unveiled during the University of Pennsylvania commencement the past week.

MAX SANGER, the noted gynecologist of Leipsic, has accepted a call to the German University at Prague, as professor of obstetrics and gynecology in the place of Professor Rosthorn, who was recently transferred to Innsbruck.

A REPORT from Norfolk, Va., announces that the Italian brig *Anita S.*, from Montevideo, which sailed on December 25 last for Baltimore, had been delayed by adverse winds and, running out of fresh provisions, scurvy had attacked the crew.

THE ENGLISH authorities now require from the physician the declaration of intoxication from lead, arsenic or phosphorus when it is presumably caused by the subject's occupation. Anthrax has also been recently included in the list of declarable diseases.

AN ENGLISH army surgeon, Dr. Bowron, recently died in India at the advanced age of a hundred years. Another medical centenarian, Major Mawrogenis of Athens, is still vigorous and has only temporarily relinquished his practice to be operated on for a cataract.

DR. ELLET O. SISSON, formerly professor of anatomy and director of the microscopic laboratories in the College of Physicians and Surgeons of Keokuk, Iowa, has been elected professor of public hygiene and State medicine and director of the histologic laboratory in the recently consolidated schools of that city.

AT THE commencement of Columbia University, New York City, held June 7, the degree of M.D. was conferred on 140. Among the honorary degrees conferred was that of master of science, on Dr. Edward L. Trudeau, Saranac Lake, who has made many valuable contributions to the study and treatment of pulmonary tuberculosis.

PAST ASSISTANT Surgeon G. A. Lung, of the *Philadelphia*, now at Apia, Samoa, has been recommended by Admiral Kautz for gallant services displayed during the recent disturbances among inhabitants of that island. Secretary Long has written an official letter to Dr. Lung as follows: "Your conduct reflects the greatest credit upon you and upon the service."

OUR EXCHANGES relate that during a recent smallpox scare at Belfast, one of the newspapers announced that its editions were sterilized. "Read the sterilized Northern Daily" was the cry, and its circulation widely increased by this method of antiseptic advertising. It suggests the wish that some of our yellow journals could also be sterilized, contents and all.

ACCORDING to *Progrès Méd.*, May 27, groans were heard issuing from the tomb of a young woman who had been buried a few hours before, at Illanitz, Austria. The authorities were notified, and the coffin opened. The corpse was found on its side, the face covered with blood and the shroud torn to fragments. We do not endorse the truthfulness of this, but give it space for what it is worth.

THE MARRIAGE of Dr. Alfred Stillé, ex-president of the AMERICAN MEDICAL ASSOCIATION, and emeritus professor University of Pennsylvania, to Miss Katherine A. Blackiston of Chestertown, Md., occurred June 14. The groom is 85 and the bride 58. Dr. Stillé is a widower, and was the predecessor of the late Dr. Wm. Pepper in the chair of medicine in the University of Pennsylvania.

THE WAR department has made public the statement that Dr. H. A. Young of the Utah Battery, while engaged in operations in the region of the pumping station at Manila, February 6, was cut off from the army force and his body was found horribly mutilated. Shortly after the body had been discovered the *Nebraska* shelled one of the insurgent trenches, leaving seventeen dead on the field.

A STUDENT of the University of Vermont is said to have instituted suit in the sum of $10,000 against one of the professors in that institution for injuries received from exposure of a fractured leg to the X-ray, for the purpose of taking a photograph of the injured member. The writ declares that, as a result of the exposure, discoloration of the flesh occurred, with subsequent atrophy of the tissues. All told, ten skiagraphs had been taken.

OUR French exchanges relate that a sound was inadvertently left in the body after an obstetric operation, but the patient was not informed, as the surgeon did not consider its presence dangerous. Requiring surgical intervention again a couple of years later, the sound was discovered and the patient at once sued for damages. An expert committee consisting of Brouardel, Thoinot and Roger decided that no professional error had been committed and the suit was dismissed.

THE HEALTH officials of Mississippi and Alabama have decided not to quarantine against New Orleans on account of the isolated case of yellow fever which occurred in that city. No other cases have developed in the twelve days that have elapsed since the death of the patient referred to (JOURNAL, June 3, p. 1265). Dr. F. W. Blunt, State health officer of Texas, has raised the quarantine against New Orleans in regard to all freight, other than second-hand furniture and

household goods. Passengers will be admitted at an early date.

THREE classes of well-to-do patients are now admitted to the Paris public hospitals: strangers or foreigners passing through the city; persons with infectious diseases, and persons from small towns, requiring a severe operation that can not be performed at the residence or in an ordinary sanitarium. The surgeons and physicians who attend them are protesting against gratuitously treating these persons, frequently abundantly able to pay, but no official notice has been taken of their protests.

THERE IS, it appears, a State law already enacted in Michigan, requiring physicians to report all cases of consumption to the board of health. At a recent meeting of the Detroit health commissioners, an examination of the returns of death revealed that a number of prominent physicians had given death certificates stating consumption as the cause in cases that had not been previously reported as suffering from the disorder, and these were promptly selected for prosecution.

HYSTERIA seems to be uncommonly prevalent among the male laboring classes in St. Petersburg. Bary mentions (*St. Petersburg Med. Woch.*) finding sixteen cases among 125 men working in one tannery and that 10 per cent. of the male cases of nervous affections in his charge have the stigmata of hysteria. He considers it an affection of the higher psychic centers, which removes the restraint from the lower centers. He notes that the psychic symptoms predominate among his patients in the upper classes and the physical among the lower.

ITALY is reminding the world of its obligations to her in the sphere of electricity by the international electric exposition that opened at Como in May, to celebrate the centennial of the discovery of the Voltaic pile at Volta's birthplace. The achievements of Galvagni, Nobili, Matteucci and others, in applying electricity to the healing art, are worthily presented among the displays of a thousand exhibitors from all over the world. It is proposed to hold the Italian medical and surgical congresses also at Como this year, in honor of the great scientist.

PROFESSOR KOCH and assistants have been at the municipal hospital of Grosseto, Italy, since the beginning of May, where he has been continuing his investigations on malaria. Grosseto is situated between Rome and Genoa, on an extensive plain, which was in olden times the *lacus prelius* of Cicero. This plain had become a morass, and saturated with malaria, but the government, by a system of drainage has partially reclaimed it. Now it is a fine pasturage, but still affected with some malaria.

THE BELGIAN physicians discussing the question of the declaration of contagious diseases with a view to securing legislation assert that the principle involved is the same as when a fire breaks out in a house. The head or some member of the family—not the physician—should at once notify the health authorities, and as the head of the family has learned to find the way to the fire alarm box and the tax collector's bureau, he can soon learn the way to the health bureau if the laws are stringent enough to entail penalty for neglect. The family should also be reimbursed if there is pecuniary loss from the isolation required, as in case of damage from fire.

APROPOS of the recent appointment of Dr. J. C. Webster, to succeed the late J. H. Etheridge, previously noted in the JOURNAL, the following comment is of interest:

"Dr. J. Clarence Webster, lecturer on gynecology in McGill University, Montreal, has been appointed professor of obstetrics and gynecology in the University of Chicago. Dr. Webster, after graduating in arts at Mount Allison University, studied medicine at Edinburgh, where he graduated M.B. in 1888 and M.D. in 1891. In 1889 he became assistant lecturer on obstetrics in the Edinburgh School of Medicine, and in 1890 he was appointed first assistant in the midwifery department of the University of Edinburgh, as well as private assistant to Prof. A. R. Simpson. He has been connected with McGill University since 1897. Dr. Webster is a Fellow of the Royal College of Physicians and of the Royal Society of Edinburgh. He is the author of a text-book on gynecology, a monograph on extrauterine pregnancy, and numerous other contributions to medical literature."—*British Medical Journal*, June 3.

Public Health.

Philadelphia Mortality Statistics.—The number of deaths occurring in the city for the entire week was 478, an increase of 52 over the previous week, and of 115 over the corresponding week of last year. Of the total number of deaths, 141 occurred in children under the age of 5 years.

Health Measures in Mexico.—The Mexican National Academy of Medicine has petitioned the authorities not to allow streets to be dug up for more than a hundred meters at a time, and to insist upon the replacing and repaving of the part torn up before another stretch is disturbed; also the adoption of the Paris methods, when earth known to be very much infected is being excavated, disinfection with 100 grams of ferric sulphate and 200 of unslaked lime to the square meter, whenever work is suspended, and disinfection of the soil to be removed in closed wagons beyond the city limits, with five times this amount to each cubic meter.

Municipal Sterilization of Meat.—Seven towns in Belgium, including Bruges, have a sterilizing plant which cooks the meat from slightly tuberculous cattle. It is then sold, with the juice, at a low price and the proceeds given to the proprietor of the animal, which with the indemnity accorded by the Government, reduces to a minimum his financial loss. The Minister, De Bruyn, states (*Gaz. Méd. Belge*, May 4) that in some places the demand for this wholesome and appetizing meat far exceeds the supply. He adds that the national and state authorities are ready to assist communities wishing to establish a sterilizing plant.

Sanitary Orders in Hawaii.—The commanding officer of the U. S. troops at Camp McKinley, Honolulu, H. I., has issued orders (April 29, 1899) calling attention to the importance of making every effort and taking every measure of precaution for the preservation of health and healthy conditions. Company officers and others directly responsible for the welfare and care of their men are required to give special attention to those portions of army regulations under the head of interior economy, police, discipline and messing and cooking which have a bearing on the subject of cleanliness and other matters affecting the health of the men and the police of barracks and grounds. The substance of these regulations and the code of rules prescribed in orders for the cleanliness and police of the camp and the removal of slops, garbage and excremental filth are required to be repeatedly communicated and impressed on

the minds of the men by their officers, so as to make them appreciate the importance of their observance. Certain recommendations of the senior medical officer are promulgated for the preservation of health in the tropics. 1. Drink no liquids, except milk, which have not been thoroughly boiled. The germs of most tropic diseases live in water. Boiling for at least half an hour will kill these disease germs. 2. Do not lie on the ground at any time, more especially during the evening and night. 3. Do not eat heartily or drink freely when much fatigued or overheated. 4. Do not eat green or overripe fruits. 5. Do not wear damp or wet clothing. 6. Avoid prolonged exposure to the sun in the middle of the day. 7. Do not eat pies, cakes or other pastry sold by street venders, prepared from poor and cheap materials and possibly in filthy places. 8. Sea bathers are cautioned that in the outer surf the undertow is so strong as to be dangerous even to good swimmers, and that just outside the reef there are sharks. 9. Leprosy is more prevalent among the native Hawaiians than among other inhabitants of the islands, and is believed to be communicated by contact. The strict observance of these cautions and of ordinary rules of good living will bring, as a sure result, the preservation of the best conditions of body with which to resist disease. The senior medical officer is Major M. W. Wood, surgeon U. S. A.

Health Reports.—The following cases of smallpox, yellow fever, cholera and plague have been reported to the Surgeon-General of the U. S. Marine-Hospital Service, during the week ended June 10, 1899.

SMALLPOX—UNITED STATES.

Alabama: Mobile, May 31 to June 3, 2 cases, 1 death.
California: Los Angeles, May 27, 1 case.
District of Columbia: Washington, June 3 to 4, 3 cases.
Florida: Jacksonville, May 27, 1 case.
Georgia: Savannah, May 29 to June 6, 10 cases.
Indiana: Evansville, June 3, 5 cases.
Kentucky: Louisville, June 1, 9 cases.
Louisiana: Jalnerette, June 3, 1 case; Shreveport, June 3, 2 cases.
Maryland: Baltimore, June 3, 2 cases.
Massachusetts: Boston, June 3, 2 cases; Fall River, from outbreak to June 3, 18 cases; Swampscott, May 31 to June 3, 2 cases, 2 deaths.
Minnesota: Minneapolis, June 3, 2 cases.
Missouri: St. Louis, May 29 to June 5, 8 cases.
Nebraska: Omaha, May 29, 1 case.
New York: New York, May 29 to June 3, 15 deaths.
North Carolina: Charlotte, May 31, 1 death reported.
Ohio: Columbus, June 3, 13 cases; Massillon, June 3, 1 case.
Oklahoma: Oklahoma City, June 1, 1 case.
Porto Rico: Ponce, May 17, 1 case.
Rhode Island: Providence, June 3, 1 case.
Virginia: Newport News, May 31 to June 8, 2 cases; Norfolk, May 31 to June 8, 6 cases, 1 death; Portsmouth, May 31 to June 8, 3 cases.

SMALLPOX—FOREIGN.

Belgium: Antwerp, May 8 to 28, 11 cases, 6 deaths.
Brazil: Rio de Janeiro, April 1 to 7, 5 deaths.
England: Liverpool, May 6 to 13, 1 case; London, May 6 to 20, 3 cases, 2 deaths.
Greece: Athens, May 13 to 20, 23 cases, 9 deaths.
India: Bombay, April 25 to May 2, 3 deaths; Calcutta, April 22 to 29, 1 death; Madras, April 29 to May 5, 1 death.
Mexico: Chihuahua, May 13 to 28, 3 deaths; Mexico, May 2 to 28, 14 cases, 8 deaths.
Nicaragua: Bluefields, May 8 to 27, 2 cases.
Russia: Odessa, May 13 to 20, 11 cases, 2 deaths.
Turkey: Beirut, April 29 to May 6, 1 case; Constantinople, May 1 to 15, 4 deaths.

CHOLERA.

India: Bombay, April 25 to May 2, 3 deaths; Calcutta, April 22 to 29, 23 cases, 23 deaths; Madras, April 29 to May 5, 2 deaths.

YELLOW FEVER.

Brazil: Rio de Janeiro, April 1 to 7, 35 cases, 22 deaths.
Cuba: Puerto Principe, June 5, 1 case reported among U. S. troops.
Mexico: Cordaha, May 29, reported present; Vera Cruz, May 13 to 20, 68 cases, 26 deaths.

PLAGUE.

Arabia: Muscat, April 12, 2 cases.
Egypt: Alexandria, May 22, 2 cases.
India: Bombay, April 25 to May 2, 323 deaths; Calcutta, April 22 to 29, 107 deaths.
Japan: Formosa, prefectures of Taichu, Tainan, Taipeh, from outbreak to date, 1484 cases, 1076 deaths; Tamsui, April 12 to 26, 289 deaths.

Book Notices.

A Text-book on Anatomy. By American Authors. Edited by FREDERIC H. GERRISH, M.D., professor of anatomy in the Medical School of Maine at Bowdoin College. Pp. 915; 950 engravings in black and colors. Cloth, $6.50, net; flexible water proof binding for the dissecting table, $7.00 net; full leather, $7.50, net. Philadelphia and New York: Lea Brothers & Co.

This new anatomy by Bevan, of Rush Medical College, in affiliation with the University of Chicago; Gerrish of Bowdoin; Keiller of the University of Texas; McMurrich of the University of Michigan; Stewart of the University and Bellevue of New York, and Woolsey of Cornell—the professors of anatomy at their respective schools—has been written for the use of medical students as a text-book, and as a ready reference book for practitioners.

The authors are to be congratulated on having produced an anatomy which presents the essentials of the science in a clear, concise and complete form. The illustrations are more numerous and instructive than those of any single volume of anatomy so far published. The American profession, which has heretofore depended almost entirely on foreign text-books of anatomy, will appreciate this work by American authors. The authors have not hesitated to eliminate the unimportant and unessential points which have gradually grown into the older text-books of anatomy. The plates are particularly instructive to the student, the name of each structure or organ being printed in large type on the part indicated.

In reviewing the book, one is impressed with the excellent chapter on embryology which, though brief, is clear, and furnishes the student with a good working knowledge of the subject.

The chapter on muscles introduces a new and excellent feature in addition to the plates of the muscles, each muscle being shown separately in outline on the articulated skeleton with its attachments. This gives, at a glance, a complete picture of the muscle as a whole, and strikes one as being a much better method of illustrating the muscular attachments of the bones than the one heretofore generally employed of illustrating these attachments on the separate bones. We miss this excellent means of illustrating the muscles of the perineum,

The chapter on arteries is of much practical value. Their relations to surrounding structures are made more interesting and easily mastered by the introduction of plates showing the ligation of vessels and cross sections of the trunk and limbs.

The chapter on the brain and cord is a lucid description of the gross anatomy of the cerebrospinal axis; the well-established points in regard to location of nuclei and course of nerve-fibers are given, but the questionable points have been omitted. The peripheral nerves and organs of sense and the subject of splanchnology have been well handled.

A special chapter on relational anatomy, including cross sections of the entire body, surface anatomy and skiagraphs of the normal body are innovations which are to be commended. A chapter on practical anatomy, which is a scheme by which the book can be used as a dissector, completes the work. Taken as a whole, the work is a valuable one, and will be favorably received by both teachers and students of anatomy. We believe that it will take its place as one of the leading text-books.

Dr. Gerrish, the editor, deserves special notice for both the

excellence of the chapters furnished by him and the editing of the entire work.

Diseases of the Ear, Nose and Throat, and Their Accessory Cavities. By SETH SCOTT BISHOP, M.D., D.C.L., LL.D., professor of the nose, throat and ear in the Illinois Medical College; professor in the Chicago Post-Graduate Medical School and Hospital; surgeon to the Post-Graduate Hospital, one of the editors of the *Laryngoscope*, etc. Second edition. Thoroughly revised and enlarged. Illustrated with 94 chromo-lithographs and 215 half-tone and photo-engravings. 6½x9½ inches. Pages xix–554. Extra cloth, $4.00 net; sheep or half-Russia, $5.00 net. Philadelphia: The F. A. Davis Co.

This is a second edition issued about five months after a first edition. The author has made some additions, notably articles on "Life Insurance Affected by Diseases of the Ear, Nose and Throat," "Autoscopy" and "Related Diseases of the Eye and Nose." The book contains a large number of illustrations. Many, as for example, one showing a mastoid operation (page 163), in which a large number of assistants are photographed, are of no scientific value. We doubt the wisdom of so many colored plates, as the coloring in many of them is deceptive, because they are not true to the appearance under natural or artificial light.

In a volume of this size, treating the diseases of the ear, nose, pharynx and larynx, the consideration of each individual disease is necessarily rather unsatisfactory in such condensed form, inasmuch as there are so many treatises before the public covering the same subjects in so thorough a manner. Much space is given to treatment of the various affections, but here there is so much of the individual method and opinion that the work is of less scientific value, notably, in the articles on hay-fever, argued to the author's conclusion as being of uric acid origin. In these days so much is written on the uric-acid diathesis, and such a large number of individuals have such a condition, that it is not surprising that it should be made an etiologic factor in hay-fever. In the light of the comparatively small number of those who are afflicted with hay-fever, the argument loses much of its value. From the results of treatment on this theory in his own case, and the repetition of his experiments on others, he advises its use. The results of others' experiences are not so satisfactory. The collated opinion of authorities at the end of the article are of interest, but they poorly represent the views of many of those quoted. Many articles, however, are well written and are profitable reading; those on the ear especially so.

Necrology.

HENRY E. CRAMPTON, M.D., N. Y. Medical College (now extinct) 1857, of New York City, died at Glen Ridge, N. J., May 28. He was born April 10, 1837, in the old fourth ward of New York, and, on his father's side, was descended from one of the early settlers of Guildford, Conn. His mother's family was descended from a member of an old Dutch colony in Harlem, N. Y. During the Civil War he served in the Federal army until stricken with typhoid fever, from the results of which he appeared never to have perfectly recovered. At the time of his death he was treasurer of the N. Y. Academy of Medicine, and also vice president of the Association for Improving the Condition of the Poor, besides being a member of most of the leading medical societies. His delight was in unostentatious philanthropic work, in which the sanitary requirements of children held a conspicuous place.

ALBERT L. CALDER, M.B., Providence, R. I., died May 24, aged 74 years. Dr. Calder served in the General Assembly as representative in 1891–2, and was one of the original members of the State board of pharmacy, serving on that board as president from 1870 until 1885, when he declined further appointment.

RICHARD B. WESTNEDGE, M.D., surgeon and first lieutenant U. S. A., died of typhoid fever, at Manila, June 10. Dr. Westnedge, after graduation from Rush Medical College, Chicago, practiced in Dubuque, Iowa, from which city he entered the army at the beginning of the Hispano-American War. He first served in Cuba, later going to Manila with the Third Regiment.

ELIZUR HITCHCOCK, M.D., Western Reserve Medical College, 1860, died in Akron, Ohio, May 21. He was born in Talmadge, Ohio, in 1832. His parents were among those who as New Englanders settled in the Western Reserve, in Ohio. During the Civil War he was an assistant surgeon of the Seventh Ohio Volunteer Infantry, but returned to civil life after his muster out.

JAMES M. SHOWERMAN, M.D., College of Physicians and Surgeons, Buffalo, N. Y. (now extinct), 1881, died recently at his home in Batavia, N. Y., aged 60 years.

ALFRED O. STIMPSON, M.D., McGill University, Montreal, P.Q., 1868, was found dead in his office, in Thompson, Pa., May 20. He served as regimental surgeon during the war with Spain.

CHARLES W. PFEIFFER, M.D., Bellevue, N. Y., died at his home in New York City, May 22. He was born in Philadelphia in 1854, and not long after his graduation became attached to one or two of the New York City departments as a visiting physician.

JOHN W. BACON, M.D., Los Angeles, Cal., died in that city May 16. He was born in McDonough County, Ill., in 1838, and received his degree of M.D. from Rush Medical College, Chicago, in 1859, later taking a special course at Bellevue.

JOHN P. CORCORAN, M.D., Detroit, Mich., prominent in that city as an expert on smallpox, died May 29. He was born in Ireland, 48 years ago, and received his degree of M.D. from the Detroit College of Medicine in 1874.

JOSEPH D. WALLACE, M.D., who for some time had been demonstrator of anatomy at the Medico-Chirurgical College, Philadelphia, died in that city May 26, from peritonitis.

WM. B. LYONS, M.D., Huntington, Ind., was killed by a train in that city May 22. Dr. Lyons was 81 years of age and received his medical degree from Rush Medical College, Chicago, in 1865, and previous to that time attended medical lectures in Cincinnati in 1850.

JAMES L. BAILEY, M.D, N. Y. University, 1883, of New York City, died May 29, aged 45 years. . . R. T. Harrison, M.D., Hot Springs, Ark., was drowned near his home May 20. . . A. H. Jones, M.D., Sheridan, Wyo., died May 20, aged 32 years. . . Mark Nivison, M.D., New York City, in Newark, N.J., May 19, aged 61 years. . . Chas. W. Pfeiffer, New York City, May 22, aged 45 years. . . G. A. Thompson, M.D., Chicago, died in Shreveport, La., June 1.

DEATHS ABROAD.

PROFESSOR ZINNIS, Athens. . . Dr. Ziegler, chief of the medical department of the Swiss army. . . Prof. G. Astaky of Bucharest, aged 46 years, director of the Institute of Gynecology, etc., and author of numerous works on the suture of nerves and tendons, etc. . . Dr. John Moir, president of the Royal College of Physicians and Surgeons, Edinburgh, Scotland, died during the last week in May, in his 92d year.

Miscellany.

Discovery of Chloroform.—Before May, 1831, and anterior to Soubeiran and Liebig, Samuel Guthrie of Sackett's Harbor discovered chloroform and spoke of its antispasmodic and stimulative properties. As early as January, 1832, Eli Ives, professor of medicine in Yale, reported to Benjamin Stilliman, professor of chemistry in the same institution, of his successful use of chloric-ether—30- to 60-drop doses—for the anginæ of scarlet fever in both children and adults; and by inhalation to overcome dyspnea.

Cardiac Asthenia of Pneumonia.—Elsner recommended, at the recent meeting of the American Climatological Association, a mixture consisting of fifteen drops each of compound spirit of elder, aromatic spirit of ammonia, compound spirits of lavender and tincture of valerian, to be given at intervals of an hour or two. In addition, ¼ grain spartein sulphate and from 4 to 6 grains of caffein may be given at intervals of from four to six hours.

Pathogenesis of Infectious Venous Thrombosis.—Microbes produce thrombosis by means of their toxins after they have found their way into the circulation. These toxalbumoses destroy the red and white corpuscles and even the hematoblasts. They also destroy the nucleins contained in the leucocytes, with the resulting production of a leuconuclein or fibrin ferment which leads to the coagulation of the plasma of the blood and the birth of a clot when compression occurs at any point. (Jakowski.) Slight continuous elastic compression favors thrombosis more than stronger but transient compression.—*Centralblatt f. Bakteriologie*, XXV, 1.

Dionin in Chronic Morphinism.—This is recommended by Fromme (*Berliner Klin. Woch.*, April 3, p. 302), to neutralize the unpleasant symptoms that result from withdrawal of the opiate. Dionin is a hydrochlorate of morphin-ethyl-ether, readily soluble in water and therefore available for hypodermic injection. The ordinary dose by the mouth is from .5 to 1 grain, beneath the skin from .25 to .5 grain; in cases of chronic morphinism larger doses will be required; 3 per cent. solutions have proved most serviceable. Injections are followed by transitory itching of the skin; when large, by a sense of fatigue—feelings of fear, when present, are removed and sleep promoted.

The Whipping-Post.—The revival of the whipping-post, which is being advocated in medicolegal circles (see JOURNAL, p. 1254), finds an echo abroad, where many of the authorities take an extremely pessimistic view of the prison systems in vogue, which, Lemaistre declares, actually incite to crime by their lack of means to impress persons in whom the moral sense is almost entirely absent. He proposes as the only efficient measure to warn youth and deter men from crime, the exhibition of the criminal in a pillory in his home village during some public gathering or fair. Conversations with even the most hardened criminals showed that they would prefer to remain in prison indefinitely, die even, rather than be exposed to this humiliation.—*Bul. de l'Acad. de Med.*

The Treatment of Sea-Sickness.—This should be begun, according to Losee (*Med. Record*, May 13), before the patient goes to sea. If possible, he should be perfectly rested and free from worry. Then, if bromids are relied on, they should be given in doses of 20 or 30 grains three times a day for from one to three days before sailing, until mild bromization is effected; on the day of sailing larger doses should be employed. A few drops of chloroform on sugar will sometimes relieve vomiting. Tincture of capsicum well diluted is also useful. Alcohol should be avoided except in the stage of exhaustion. Compound licorice in full doses is the best laxative. Opium with some mild astringent may be used for diarrhea.

Skin of Negro and Its Absorption of Heat.—Theoretically, a black skin should absorb heat and a white skin reflect it, but experience shows the reverse to be the case. Mosso has found that the extreme heat and radiation of the direct sunlight on high mountain peaks can be borne if the face and hands are blackened (*Rev. Gén. des Sci.*, 1899, p. 185). Guillaume has established that the grease in the skin of the negro reflects the rays. Calorimetric tests have shown that grease has great emitting power in the infrared. All the radiations in the negro are far along in the infrared (black pigment and red blood). The pigment, therefore, protects the derma from the sun's rays, while radiation from the grease cools it. As he wittily observes: "the negro lives comfortably in the shadow of his skin."—*Progrès Méd.*, May 6.

Course of Physiotherapeutics.—The exploitation and accurate knowledge of the mineral springs of a country is a source of wealth, health and education, thus directly interesting the department of agriculture, of the treasury and especially the urgently needed department of public health. The modern tendency of therapeutics is to work along the lines indicated by nature, and the importance and significance of balneology and climatology are only beginning to be realized. On the other hand, we have outgrown many drugs which still cumber the pharmacopeia, and it is a waste of time for the student to study them when modern therapeutics is drifting ever farther away from them. A Russian professor makes an eloquent appeal in the last *Deutsche Med. Woch.* for the curtailing of the hours devoted to pharmacology and the introduction of a course of physiotherapeutics into the medical curriculum. The chair of hydrotherapeutics and balneology, established at Vienna for Professor Winternitz, is proving very successful, and a special institute for physiotherapeutics is planned at the Berlin "Charité."

Army Transports Across the Pacific.—Capt. Thomas U. Raymond, assistant surgeon U. S. A., the medical superintendent of the army transport service, has reported the sailing, April 18, 1899, of the transport *Hancock*, formerly the *Arizona*, from San Francisco, Cal., to Manila, P. I. The vessel carried the 21st U. S. Infantry and Battery E., 1st U. S. Artillery, with the following medical personnel: Major W. P. Kendall, brigade surgeon, vols., Lieutenant H. E. Wetherill, assistant-surgeon, U. S. A., Acting Assistant-Surgeons J. H. Hepburn and C. M. Drake, and one hospital steward, four acting stewards and sixteen privates of the hospital corps. The transport surgeon is Acting Assistant-Surgeon W. A. McVean. The *Hancock* arrived from Manila, April 6, 1899, bringing 137 sick and convalescent soldiers, under the care of Acting Assistant Surgeon Clarence Quinan and a detachment of the hospital corps. The sick were transferred to the hospital at the Presidio, San Francisco. On April 18, 1899, the chartered transports, *Senator* and *Ohio*, sailed from San Francisco for Manila. The former vessel carried the headquarters band and six companies of the 13th U. S. Infantry, with the following medical personnel: Major Henry I. Raymond, brigade surgeon, vols., Acting Assistant-Surgeons George W. Roberts and Charles B. Mittelstaedt, one hospital steward, one acting hospital steward, and seven privates of the hospital corps. The *Ohio* carried six companies of the 13th U. S. Infantry, a detachment of the hospital corps, and a detachment of the signal corps. The medical officers were Acting Assistant-Surgeons Peter W. Beckman and H. Eugene Stafford. A week later, April 15, the chartered transport, *Morgan City*, sailed from San Francisco, with 550 recruits for the regiments in the Philippines and fifty recruits for the hospital corps. The medical officers were Acting Assistant-Surgeons Joseph Reifsnyder and John Mason Williams. On May 8, 1899, the chartered transport, *Roanoke*, arrived at San Francisco from Manila, bringing a few discharged soldiers and other passengers, among them Acting Assistant-Surgeon S. J. Fraser. This vessel carried no sick.

Typhoid Fever Among Troops at Puerto Principe, Cuba.—Major Walter Reed, surgeon U. S. A., has returned to Washington, D. C., from a short visit to Cuba, where he was engaged in investigating the causation of an outbreak of typhoid fever in two regiments, the 15th U. S. Infantry and the 8th U. S. Cavalry, encamped near Puerto Principe. The infantry camp was established on an open plain four miles northeast of the city and a short distance from the Hatibonica River. The site was well drained and covered with excellent turf. The quarters were hospital tents floored and provided with cots. The water-

supply was hauled from the river or from a tributary creek, but before being used it was boiled and passed through Pasteur-Chamberland filters, one of which had been issued to each of the companies. Garbage pits were not permitted to be dug in the camp, all refuse being wagoned to a dump at a distance. The dry-earth system was used for excreta, the boxes being removed daily by Cuban scavengers and then well limed before being put into place again. Flies in considerable numbers were feeding on exposed excreta, as the men did not make an efficient use of the dry earth provided. The cavalry regiment was formerly camped on the Hatibonica River, in the same neighborhood, but in the beginning of April it moved to a new site, distant about one and a half miles south. Here every condition was satisfactory. Instead of wooden boxes, galvanized iron boxes with tight covers were used in the latrines and the supply of carbolic acid and dry earth was liberal and freely used by the men. Tin urinals containing carbolic acid were placed in each company street at night. The infection of typhoid fever was brought from the United States by both regiments. The infantry regiment arrived at Puerto Principe on Dec. 11, 1898. A febrile case was admitted into the regimental hospital on the 19th as a malarial remittent, but the patient died Jan. 4, 1899, with ulceration of Peyer's patches. During January, February and March three other deaths occurred from typhoid fever, while many men were on the sick report as affected with malarial intermittent fever, as they did not yield to quinin, and five of those sent to the departmental hospital at Puerto Principe had the diagnosis changed to typhoid fever. On its arrival in Cuba the cavalry regiment sent a case of typhoid fever back to the United States on the transport *Manitoba*. Fevers recorded as remittent were of frequent occurrence after camp was established, and some of the cases were quite prolonged in their duration, notwithstanding the liberal use of quinin. A death occurred on February 7 and another on the following day and the necropsy discovered the lesions of typhoid fever in both cases. Major Reed attributed the spread of the infection in the regiments to the failure to recognize the specific character of the prevailing febrile cases until the post-mortem examinations revealed the pathognomonic lesions. The active measures taken after this recognition were speedily followed by the subsidence of the outbreak.

Questions, Answers, Etc.

CROTTE'S CONSUMPTION CURE.

RED WING, MINN., June 8, 1899.

To the Secretary of the A. M. A.:—Having read in the daily papers about the paper read before the ASSOCIATION, by F. Crotte, concerning his "new discovery for the cure of consumption," and having been urged by my patients to find out the facts and the truth in it, I hereby take the liberty to ask your opinion about it, and whether you think it is only a money-making scheme, which I myself am inclined to believe.

Yours very respectfully, TH. THORESEN, M.D.

The above is a sample of many letters that have come to this office during the last two or three days and represents the physician's side of the correspondence.

The following from Bristol, Pa., is evidently not from a physician.

BRISTOL, PA., June 9, 1899.

To the Secretary of the A. M. A.:—Please send me the address of Francisque Crotte, the consumptive expert, as I wish to communicate with him; or can you kindly give me any information in this cure of consumption, as I require medical treatment. Very respectfully, W. J. S.

Here is one from Sedgwick, Kan.

SEDGWICK, KAN., June 9, 1899.

To the Secretary of the A. M. A.:—I see a notice in the public press that you are in possession of the "Francisque Crotte Consumption Cure," and that you offer to treat a number (500 I believe) free, as an experiment. I would like to be one of that number. I am an ex-union soldier (4th Pa. Cav.) and am not able to pay for treatment. H. D. H.

Here is another from Elizabeth, N. J.

ELIZABETH, N. J., June 9, 1899.

To the Secretary of the A. M. A.:—Having seen an advertisement in the *N. Y. Herald* in regard to Francisque Crotte's cure for consumption, I am very anxious to communicate with him about my son, who is now very sick at Denver, with lung trouble.

Could you give me any information as to how I could reach him? My son is 23 and has only been sick a short time, therefore we feel that if something was done at once we could stop the dreaded disease.

Yours truly, A. H.

Such letters are coming in from all parts of the country, showing that advertising pays. Briefly, in reply, we will say that a representative of Francisque Crotte was at the Columbus meeting and called on the chairman of the Section on Medicine, stating that he had a paper written by Francisque Crotte and desired the privilege of reading it before the Section or, if it would be perfectly satisfactory, to read it by title. The chairman of the Section replied that it was not on the program and that it really did not belong to his Section; that he could not accommodate the gentleman, and referred him to the chairman of the Section on State Medicine. Again the enterprising representative of Crotte received a rebuff and, after seeing the president of the ASSOCIATION, again applied to the chairman of the Section on General Medicine, and stated to him that he was anxious that it should either be read by title or published in the JOURNAL, so that it could have the endorsement of the AMERICAN MEDICAL ASSOCIATION. He was referred to the editor of the JOURNAL, to whom he applied, asking that his paper be published, and at the same time he intimated to the editor that he would gladly pay for having it appear in the JOURNAL. He was asked to submit it for consideration and then an answer would be given. The paper was submitted and an answer given, respectfully declining to publish the same. Nevertheless, this agent, through the associated press, had telegraphed all over the country that his method had been accepted and endorsed at the meeting of the AMERICAN MEDICAL ASSOCIATION, and as a result another "cure for consumption" is being heralded abroad, and letters are coming to the ASSOCIATION as endorsers of the method.

The scheme has been beautifully worked to reach the people, and in spite of the fact that the ASSOCIATION in three different ways absolutely refused to recognize or have anything to do with what they believed to be an advertising scheme and a humbug, it is made to appear that the ASSOCIATION endorses the cure.

The Crotte cure claims to be an electric (cataphoric) use of formic aldehyde, or, quoting from the paper submitted: "It is by combining the destructive power of static electricity with the power of its current to convey through the whole human body medicinal substances (formic aldehyde) that I have obtained results irrefutable and worthy of consideration."

It is the opinion of those who had the privilege of reading the paper and hearing the claims made by the agent of Crotte, that the whole thing is only one of the numerous advertising, money-making schemes. Considering the fact that it has been so widely advertised from one end of the country to the other, and that physicians will be asked in regard to it, we take the matter up thus early so that our readers may have some idea of "the latest wonderful cure for consumption." It will be impossible to counteract the lie these people have published by the press of the country, to the effect that the AMERICAN MEDICAL ASSOCIATION had endorsed the "cure"; at the same time it is well for the profession to know the facts in the case.

"CHRISTIAN SCIENCE."

BUFFALO, N. Y., May 29, 1899.

To the Editor:—Some time ago I read an article reviewing Mrs. Eddy's book on "Christian Science." Looking over many numbers of the JOURNAL, I fail to find it. I do find, however, two articles on the same subject—Nov. 19 and Dec. 10, 1898. If convenient, please inform me where I can find the article mentioned. One of these mystic "doctors" is being tried here for manslaughter, and the public are greatly interested in the case.

J. B. COAKLEY, M.D.

Answer:—Probably the writer refers to Dr. Edmund Andrews' article in the JOURNAL of March 18, 1899. We refer him also to Dr. C. A. L. Reed's "Christian Science." "Sociological Study," published by McClelland & Co., Cincinnati, last year; to "The Legal Aspects of Christian Science" in the *North American Review* for March, and to two articles in the May *Arena*, by Horatio W. Dresser and Josephine Curtis Woodbury, respectively. The last is an exposure by a former disciple. Dr. Reed's pamphlet gives, with a general exposure of the delusion, a statement of its legal status as shown in some court decisions quoted.

LOOK OUT FOR HER.

MUNCIE, IND., June 5, 1899.

To the Editor:—The note of Dr. Edward J. Brown (JOURNAL, June 3, p. 1269) gives a timely warning. Miss M. C. Brodie "touched me" for $5 about one month ago. She told a plaintive story of desertion by a man and his wife who owed her for services as a nurse. She was stranded in Muncie, on her way to Cleveland, where she had the promise of a lucrative patient, and would send me the money in two weeks. Of course, she did not do so. I feel sure she is a swindler. Her card reads: "M. C. Brodie, Graduate of Farrand Training School," Care Dr. Pomeroy, Prospect and Perry Sts., Cleveland, Ohio. She showed me good testimonials and her badge. She has a good face, her hair shows threads of gray, and she is calculated to deceive, as it were, the very elect.

G. W. H. KEMPER, M.D.

The Public Service.

Movements of Army Medical Officers under orders from the Adjutant-General's Office, to and including June 8, 1899.

Jas. A. Alexander, acting asst.-surgeon, from Camp Meade, Middletown, Pa., to Havana, Cuba, for assignment in the Div. of Cuba.

W. Edson Apple, acting asst.-surgeon, from Philadelphia, Pa. to Havana, Cuba, for assignment in the Div. of Cuba.

John W. Coffin, lieutenant and asst.-surgeon 10th Pa. vol. inf., honorably discharged to take effect June 6, 1899.

Daniel C. Cooney, acting asst.-surgeon, from Washington, D. C., to Havana, Cuba, for assignment in the Div. of Cuba.

Jos. J. Curry, acting asst.-surgeon, from the general hospital at Savannah, Ga., to Brooklyn, N. Y., for duty on the hospital ship "Missouri."

Augustus A. DeLoffre, major and surgeon U.S.A., retired June 8, 1899, on account of disability incident to service.

Peter E. Egan, captain and asst.-surgeon U.S.A., to report at Washington, D.C., for examination for promotion, returning thereafter to his proper station.

Nevil M. Garrett, acting asst.-surgeon, from Frankfort, Ky., to San Francisco, Cal., for duty in the Dept. of California.

Deane C. Howard, captain and asst.-surgeon U.S.A., to relieve Major Jas. P. Kimball, surgeon U.S.A., as member of an examining board convened at Governor's Island, N. Y., by S.O. No. 274 of 1898.

J. Stebbins King, acting asst.-surgeon, from duty at Pinar del Rio, Cuba, to Ft. Hamilton, N. Y.

W. L. Kneedler, major and brigade surgeon vols. (captain and asst.-surgeon U.S.A.), former orders amended so as to require him to return from Pinar del Rio, Cuba, to his proper station, West Point, N. Y., by July 1, 1899.

Donald Maclean, Jr., acting asst.-surgeon, from the general hospital at Savannah, Ga., to San Francisco, Cal., for duty in the Dept. of California.

Ogden Rafferty, captain and asst.-surgeon U.S.A., to report at Camp Meade, Middletown, Pa., to accompany the 9th U.S. Inf. to Manila, P. I.

John H. Stone, lieutenant and asst.-surgeon U.S.A., to proceed from Ft. Leavenworth, Kan., to New York City, reporting by telegraph to the adjutant-general, Washington, D.C.

Samuel M. Waterhouse, lieutenant and asst.-surgeon U.S.A., from the general hospital at Savannan, Ga. to Governor's Island, N. Y., for duty at Ft. Wood, N. Y.

William H. Arthur, major and surgeon, U. S. A., commanding the hospital-ship "Missouri," to proceed from Brooklyn, N. Y., to Washington, D. C., for consultation, returning thereafter to his proper station.

Charles L. Baker, acting asst.-surgeon, from Washington, D. C., to Martinsburg, W. Va., for annulment of contract.

Edmund Barry, acting asst.-surgeon, from the Josiah Simpson Hospital, Fort Monroe, Va., to Fort Wadsworth, N. Y., reporting by letter to the department commander.

Daniel C. Cooney, acting asst.-surgeon, from duty at Augusta, Ga., to Washington, D. C., for annulment of contract.

William B. Davis, major and surgeon, U. S. A., leave of absence granted.

Edwin F. Gardner, major and surgeon, U. S. A., from temporary duty at Fort Logan, Colo., to his proper station, Fort Grant, Ariz.

J. C. Garlington, acting asst.-surgeon, from duty at the general hospital, Fort McPherson, Ga., to San Francisco, Cal., for assignment in the Department of California.

Stephen L. Gonzales, acting asst.-surgeon, from duty at Pinar del Rio, Cuba, to Pensacola, Fla., for annulment of contract.

Charles R. Greenleaf, colonel and assistant surgeon-general U. S. A., from Washington, D. C., to Columbus Barracks, Ohio, to inspect that post, thence to San Francisco, Cal., reporting to the commanding general of the department for duty as sanitary inspector of the camps to be established for the muster out of volunteer troops returning from the Philippine Islands. On completion of these duties he will return to his proper station.

M. L. Heiffelfinger, acting asst.-surgeon, from duty at Huntsville, Ala., to San Francisco, Cal., for assignment in the Department of California.

J. Milton Heller, acting asst.-surgeon, from temporary duty at Fort Meyer, Va., to San Francisco, Cal., for assignment in the department.

F. A. Hodson, acting asst.-surgeon, from the Josiah Simpson Hospital, Fort Monroe, Va., to Denver, Colo., for annulment of contract.

Robert P. Jensen, captain and asst.-surgeon, 1st Neb. Infantry, honorably discharged, June 1, 1899, on account of disability.

S. MacCandless Stuart, acting asst.-surgeon, from Washington, D. C., to San Francisco, Cal., for duty in the Department of California.

Charles F. Mason, captain and asst.-surgeon, U. S. A., relieved from further station at Fort Logan, Colo., and from duty in the Department of Porto Rico to San Francisco, Cal., for assignment in the Department of California.

Clarence R. Milhoff, lieutenant and asst.-surgeon. U. S. A., from the general hospital at Savannah, Ga., to duty at Camp Meade, Middletown, Pa.

Paul Shillock, captain and asst.-surgeon, U. S. A., from Fort Grant, Ariz., to Fort Apache, Ari., reporting by letter to the commanding officer, Department of Colorado.

Joseph B. Whiting, acting asst.-surgeon, from duty at Savannah, Ga., to Washington, D. C., reporting to the surgeon-general.

A Roster of Volunteer Army Medical Officers.

A list of general officers and officers of the general staff of the volunteer army has just been published by the adjutant-general's office. This list shows that notwithstanding the recent muster-out of so many of the volunteer troops there yet remain in the army thirty-five majors and surgeons of volunteers. Eleven of these are officers of the regular army holding higher rank under volunteer commissions and twenty-four are officers appointed from civil life. In order of rank the latter are as follow:

Herbert W. Cardwell of Oregon, chief surgeon, 1st Division, 8th Corps, Manilla, P. I.

James H. Hyssell of Ohio, on duty at Cienfuegos, Cuba.

Henry P. Hoyt of Minnesota, chief surgeon, 2d Division, 8th Corps, Manila, P. I.

Frank S. Bourns of Georgia, on duty in the office of the provost-marshal general, Manila, P. I.

Samuel O. L. Potter of California, brigade surgeon, 2d Brigade, 2d Division, 8th Corps.

Samuel T. Armstrong of New York, chief surgeon, Department of Puerto Principe, Cuba.

George H. Penrose of Utah, brigade surgeon, 2d Brigade, 1st Division, 8th Corps, Manila, P. I.

George F. Shiels of California, brigade surgeon, 1st Brigade, 1st Division, 8th Corps, Manila, P. I.

William F. de Niedeman of Kansas, commanding post hospital at Pinar del Rio, Cuba.

Lawrence C. Corr of Ohio, commanding the general hospital at Santiago, Cuba.

Ira C. Brown of New York, commanding the general hospital at Havana, Cuba.

Simon P. Kramer of Ohio, commanding Military Hospital, No 2, Havana, Cuba.

John G. Davis of Illinois, chief sanitary officer, Department of Havana, Cuba.

Wilfrid Turnbull of Cuba, on duty in the Department of Havana, Cuba.

Robert Burns of New Hampshire, with the 8th U. S. Cavalry at Puerto Principe, Cuba.

Lewis Balch of New York, on duty in the Department of Matanzas and Santa Clara, Cienfuegos, Cuba.

William B. Winn of Missouri, on duty in the Department of Matanzas and Santa Clara, Matanzas, Cuba.

Willard S. H. Matthews of Iowa, commanding the general hospital at San Francisco, Cal.

Rafael F. Echeverria of Florida, on duty at Military Hospital No. 1, Havana, Cuba.

Henry D. Thomason of Michigan, with the 10th U. S. Cavalry at Manzanillo, Cuba.

Damaso T. Laine of Cuba, assistant to the chief surgeon and attending surgeon at Headquarters of the Division of Cuba, Havana, Cuba.

Orlando Ducker of Kentucky, on duty in the Department of Havana, Havana, Cuba.

Frederick J. Combe of Texas, on duty in the Department of Santiago, Santiago, Cuba.

Franklin A. Meacham of Texas, on duty in the Division of Cuba, Havana, Cuba.

Movements of Navy Medical Officers.—Changes in the medical corps of the U.S. Navy for the two weeks ending June 9, 1899.

Asst.-Surgeon C. A. Crawford, detached from the "Peoria" when put out of commission, and ordered to the "Wabash."

Surgeon H. B. Fitts, detached from the naval hospital, Portsmouth, N. H., and ordered to the marine barracks, Sitka, Alaska.

P. A. Surgeon C. M. DeValin, ordered to the naval hospital, Portsmouth, N. H.

Surgeon C. J. Decker, promoted to surgeon from Dec. 12, 1898.

Surgeon G. G. Herndon, ordered to Cleveland, Ohio, temporarily, for recruiting duty at the branch hydrographic office.

Medical Inspector F. Rogers, promoted to medical inspector.

Marine-Hospital Changes.—Official List of Changes of Stations and Duties of Commissioned and Non-Commissioned Officers of the U.S. Marine-Hospital Service, for the twenty-one days ended June 8, 1899.

Surgeon Eugene Wasdin, to proceed to Washington, D.C., to render report as member of a commission detailed by the President for the scientific investigation of the cause of yellow fever.

P. A. Surgeon H. D. Geddings, to proceed to Washington, D.C., to render report as member of a commission detailed by the President for the scientific investigation of the cause of yellow fever.

Asst.-Surgeon G. M. Corput, to proceed to Macon, Ga., for special temporary duty.

Hospital Steward and Chemist Henry Gahn, to proceed to New York City for special temporary duty.

Hospital Steward Walter Newbern, to proceed to the Tortugas quarantine station and report to medical officer in temporary charge for duty and assignment to quarters.

Surgeon Preston H. Bailhache, detailed to represent the service at the meeting of the American Medical Association, Columbus, Ohio, June 6-9, 1899.

Surgeon C. E. Banks, to proceed to New York City for special temporary duty.

P. A. Surgeon C. P. Wertenbaker, to proceed to Savannah, Ga., for special temporary duty.

Asst.-Surgeon S. R. Tabb, to proceed to Wilmington, N. C., for special temporary duty.

Asst.-Surgeon J. F. Anderson, department letter of April 29, 1899, granting him thirty days' extension of sick leave from May 1, amended so that said extension shall be for fourteen days from May 1.

Asst.-Surgeon G. M. Corput, to report at Washington, D. C., for special temporary duty.

Hospital Steward and Chemist Henry Gahn, to proceed to New York City for special temporary duty.

Hospital Steward E. B. Scott, to proceed to Wilmington, N. C., for special temporary duty.

Surgeon R. D. Murray, leave of absence granted by bureau letter of May 11, 1899, temporarily suspended, and directed to proceed to New Orleans, La., for special temporary duty.

Surgeon H. R. Carter, to rejoin station at New Orleans, La.

Asst. Surgeon H. S. Cumming, leave of absence for twenty-seven days granted by bureau letter of May 18, 1899, revoked from June 1, 1899.

Asst.-Surgeon R. H. von Ezdorf, to rejoin station at New Orleans, La.

Asst.-Surgeon L. D. Fricks, upon being relieved from temporary duty at Savannah, Ga., to report to commanding officer, South Atlantic quarantine station, for duty and assignment to quarters.

Acting Asst.-Surgeon S. B. Hunter, granted leave of absence for three days from June 7, 1899.

APPOINTMENT.

A. W. Slaughter of Wisconsin, to be acting asst.-surgeon U.S. marine-hospital service, for duty at Green Bay, Wis.

Dunlop Moore of Pennsylvania and Hansteen A. Stansfield of California, commissioned as asst.-surgeons May 31, 1899.

James C. Ballard of Mississippi, to be acting asst.-surgeon U.S. marine-hospital service, for duty at Natchez, Miss.

PROMOTIONS.

P. A. Surgeon W. P. McIntosh, commissioned as surgeon May 20, 1899.

Asst.-Surgeon R. Thomas, commissioned as passed asst.-surgeon May 16, 1899.

Asst.-Surgeon H. W. Wickes, commissioned as passed asst.-surgeon May 16, 1899.

Asst.-Surgeon H. S. Cumming, commissioned as passed asst.-surgeon May 16, 1899.

CHANGE OF ADDRESS.

Burkholder, C. E., from Chicago to Delphi, Ind.
Burns, C. S., from Harrison, Ark., to Braggs, I. T.
Ezell, J. J., from Dover to Weaver's Store, Tenn.
Frizelle, C. H., from Rockford, Ia., to 704 Belmont Ave., Chicago.
Galbraith, —, from Logan, Utah, to Pocatello, Idaho.
Griswold, R. W., from Detroit, to 818 Washington Ave., Bay City, Mich.
Goodson, J. A., from Nashville, Tenn., to Dixon, Ky.
Goggins, R. J., from Cecil to Pulcifer, Wis.
Headrick, C. M., from Tecumseh to 1294 K St., Lincoln, Neb.
Henely, E., from Chicago to Nora Springs, Iowa.
Hunte, A. F., from Chicago to Granada, Minn.
Jewell, P. M., from Ossian to Decorah, Iowa.
Klein, J. K., from 508 Jackson Boul. to 4908 N. Clark St., Chicago.
Moore, S. C., from Detroit to Moline, Mich.
Putnam, H. C., from Chicago to Canton, Ill.
Rhodes, J. E., from 1609 Monroe to 146 Central Park Ave, Chicago.
Ray, J. B., from Portsmouth to Scioto, Ohio.
Shepherd, H. A., from Richmond to Palmyra, Va.
Simpson, W. L., from Chicago to Knoxville, Ill.
Stewart, J. L., from Bremen, Ind., to Loomis, Neb.
Stone, I. G., from Mead, Neb., to Kingfisher, O. T.
Tomelty, T., from Chicago to 667 Washington St., Milwaukee, Wis.
Watson, S. H., from Chicago to Vinton, Iowa.